THE PENNSYLVANIA HORTICULTURAL SOCIETY · 1827 ·

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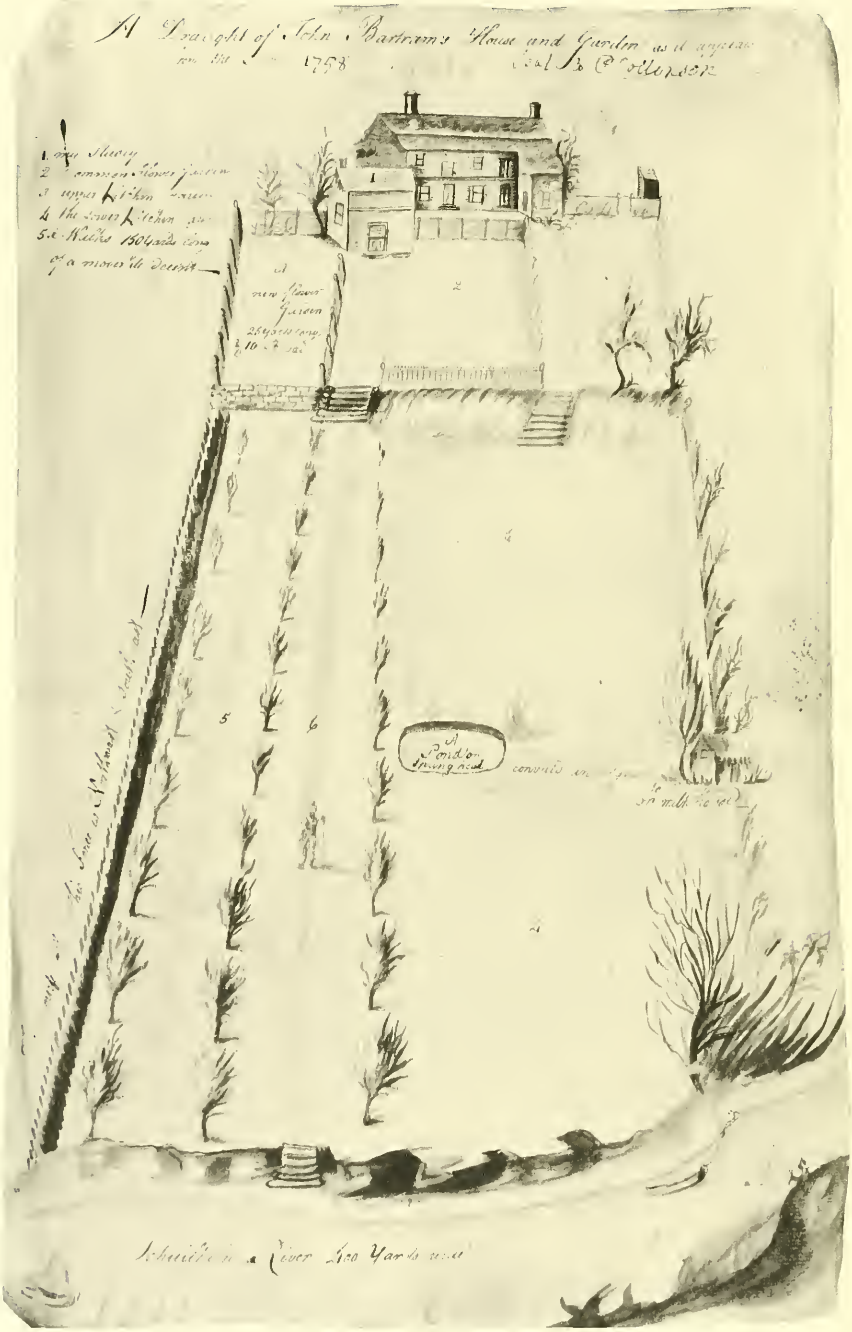
From Seed to Flower

A Draught of John Bartram's House and Garden as it appears from the River 1758
Coll. P. Collinson
1. my Study
2 Common flower garden
3 upper Kitchen garden
4 the lower Kitchen garden
5.6 Walks 150 yards long of a moderate descent
A new flower Garden 28 yards long & 10 broad
1
2
4
5
6
4
A Pond or Spring head
conveyed in pipes
to milk house
the fence is Northwest & South east
Schuilkill a River 200 Yards wide

From Seed to Flower
PHILADELPHIA 1681–1876

·1827·

A Horticultural Point of View

The Pennsylvania Horticultural Society
PHILADELPHIA
1976

Pa. Col.
SB21
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Of the limited edition of this book
two hundred and fifty copies have
been printed, of which this
is number 1

A recognized Bicentennial activity

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PENNSYLVANIA HORTICULTURAL SOCIETY

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Frontispiece: Drawing of John Bartram's garden (courtesy of the Collinson Collection, Earl of Derby's Library at Knowsley Hall).

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To the many people known and unknown,

explorers, gardeners, nurserymen, importers,

collectors, botanists,

who persisted through difficulties and hardships,

and laid the foundations of

the horticulture we enjoy today

Contents

Laurels
11

Introduction
13

Horticulture in Early Philadelphia
17

The Catalogue
29

Chronology
106

Dramatis Personæ Whose Works Are Not Represented in the Catalogue
113

A Note on Sources
115

Horticultural Places of Historic Interest in Philadelphia and Vicinity
foldout map following 116

Index
117

The Pennsylvania Horticultural Society

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Laurels for this Publication

In 1972, the Library Committee of the Pennsylvania Horticultural Society began work on a bicentennial exhibit of books highlighting the role of Pennsylvanians in the formative period of American horticulture.

The Committee invited the assistance of Professor Joseph Ewan, the country's leading botanical historian, and has, throughout, relied heavily on his work and encyclopedic knowledge. Without his willingness to participate, we could not have undertaken this publication. Most of the material presented in this catalogue and its prefatory essay is from notes and information supplied by him; and to him we extend our thanks.

Library Chairperson Barbara H. Emerson fulfilled her role as informed, committed, and working project leader. The Society is fortunate in having had her serving in this capacity. The Society is blessed in having as an emerita member of its Library Committee a person with extensive knowledge of old books, old Philadelphia, and horticulture, both old and new. Emily Read Cheston wrote much of the introduction and painstakingly reviewed the rest of the contents. Elisabeth Woodburn, a professionally experienced member of the Committee, assisted in the book selections. Marianna Merritt Hornor and Malvine Ogle Peeples handpainted two hundred fifty maps for the stiff cover copies.

Julia Lewis Morris, Society Librarian, has carried the staff responsibility for the book: coordinating, researching, rewriting, and generally managing the project. Her job has been well done. Jean Byrne, Society Editor, rendered valuable assistance; Susan Milius turned up new material in her summer researching; Ann Ku prepared the map; Doris Shalley was Copy Editor.

In addition, we thank Whitfield J. Bell, Jr., Librarian at the American Philosophical Society; Richard Dillon of the Sutro Library in San Francisco; Edwin Wolf, 2nd, of the Library Company of Philadelphia; and James E. Mooney of the Historical Society of Pennsylvania.

The Friends of the Library, by their contributions over the past three years, have enabled us to pay most of the printer's bill.

I am proud to present this book, which will be a lasting record and a fitting companion to the exhibit itself.

Ernesta D. Ballard, *President*
The Pennsylvania Horticultural Society

Ernesta D Ballard

Introduction

As part of its celebration of the nation's bicentennial, the Pennsylvania Horticultural Society has assembled a display of books and artifacts written, published, and used by Philadelphians in the last half of the eighteenth and first half of the nineteenth centuries. The great majority of the books are from the Society's own collection.

There are many ways to look at books like these. Some might concentrate on the plant material used in the Revolutionary period; others on horticultural practices; still others on landscape gardening. We have chosen to focus on a larger aspect—people who played an integral part in the horticulture of the new country.

There were colonists, particularly from England, who brought with them their traditions, their plants, and their gardening books. There were European plantsmen who emigrated to this country. There were plant explorers excited by the commercial possibilities in the huge American forests; there were naturalists fascinated by the novel species and genera to be found in the new world, and always on the lookout for new herbs and drugs for medicinal purposes. There were hopeful entrepreneurs seeking to establish new industries—vineyards for wine, mulberries for silk—and as the new nation became more prosperous, there were nurserymen offering trees and shrubs and plants and seeds, ornamental as well as useful.

We know about these people from their letters, journals, catalogues, and treatises —samples of which appear in the exhibit. To aid in an understanding of these materials, we present in this catalogue:

Horticulture in Early Philadelphia. A brief introduction to the horticultural scene that identifies a few of the characters and describes some of their activities.

The Catalogue. A series of thirty-eight brief essays about the books in the exhibit and the people involved.

A *Chronology* of significant people and occurrences related in the book, together with short biographical sketches of some of the participants mentioned briefly.

Before proceeding to the people, however, a brief word about the books themselves is in order.

Bibliophiles familiar with superb books produced in Europe in the eighteenth century may be surprised at the crudity of some of the volumes displayed here. The explanation is to be found in the colonial background. The first settlers had to rely on the mother country for their reading matter, and it was many years before the colonists began to produce books of their own. Printing was difficult. There were few presses because the British Crown, for political reasons, wanted just as little private printing as possible. Where presses did exist, they produced chiefly almanacs and legal, religious, and political books. The Massachusetts press never published any agricultural books, and even Benjamin Franklin, who had a keen interest in agricultural and kindred topics, never printed any on these subjects.

The making of paper was also a great problem. Rags were necessary, and the supply was inadequate. As a result, the early books were small, with narrow margins, and were printed on paper that did not take ink well. Until 1830, when there was a marked improvement, most of them were scrubby in appearance. Ambitious colonial authors often sent their work to English or continental presses where magnificent work in type, paper, color plates, and binding was being produced freely.

It is not surprising to find that printers in the colonies often had to supplement the earnings of their presses. Andrew Bradford, the printer under whom Franklin worked in Philadelphia, not only printed, bound, and sold books, pamphlets, and almanacs, but also dealt in whale bone, live geese, feathers, pickled sturgeon, chocolate, and Spanish snuff!

During the colonial period, the colonists had no alternative but to import their books, mostly from England. However, with the coming of the Revolution, there was an upwelling of national consciousness and the word "American" began to be used.

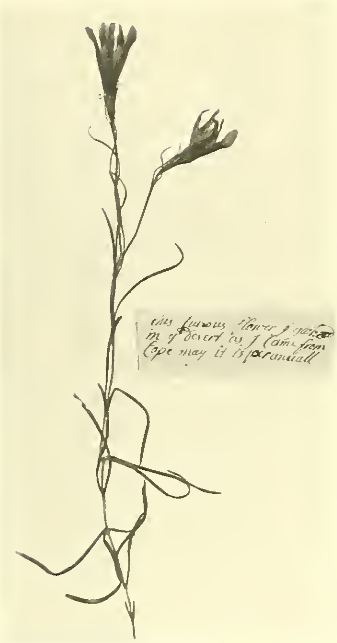
Agricultural books were printed in this country some time before either botanical or horticultural books. Many of them were copies or adaptations of English texts and made small allowance for change of climate. One of the quaintest and earliest is *An Essay on Field Husbandry*, printed in New England in five parts, beginning in 1748. It is a very small book, only about forty pages, but nonetheless, the author, Jared Eliot, gives considerable space to discussing the inadequacy of the rules of husbandry given by the classical writers. He declares: "The only old rules I have met with, I find in the Bible." He quotes five rules, but there is never a suggestion that Connecticut and Palestine do not offer similar conditions.

The New England Farmer by Samuel Deane was first published in 1790 and was much changed in later editions. The author ingenuously says that he never had leisure to devote to agriculture himself, but took his material from the best authors. He gives definite and practical directions for fences, barns, drainage, and similar projects and, in the first edition, solemnly includes "zebra" which he defines as "wild ass," but for which he gives no directions.

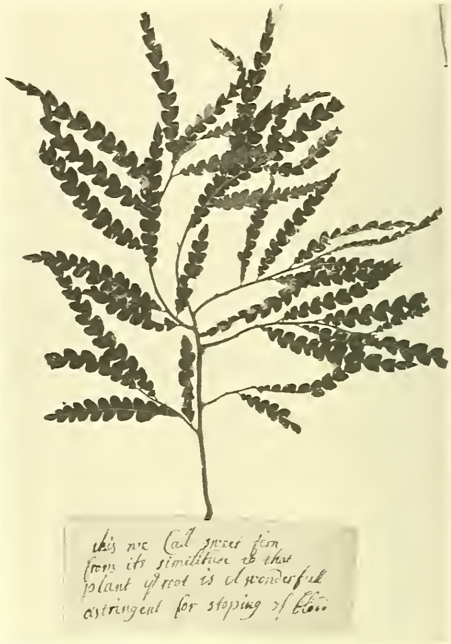
The first *American Herbal* was published in Walpole, New Hampshire, in 1801. It is a delightful little book in which everything that could be used medicinally, and many things that could not, are listed alphabetically, so that "crystals" is followed by "cucumber" and "clover" by "coal mines" and "cobwebs."

Most of the early American botanical writers lived in or near Philadelphia, and have, therefore, a close relation to each other, as is evident in the catalogue.

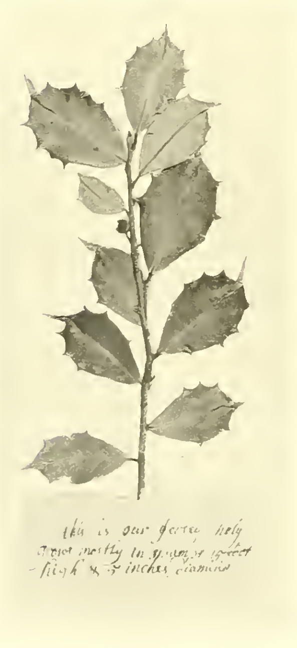
The books in this exhibit are the product of their time. A time when people were in touch with nature as an essential part of their daily lives. A time when able people could aspire to learn most of what was known about nature, and to add to the stock of human knowledge by their own observation and deduction. A time before specialization and standardization, when individuals had the confidence to form their own views and to debate them with their peers. If this exhibit helps its viewers to understand life in the Revolutionary period and our first century of independence a little better, it will have achieved its objective.


this famous flower I gathered
in ye desert as I came from
Cape may it is perenniall

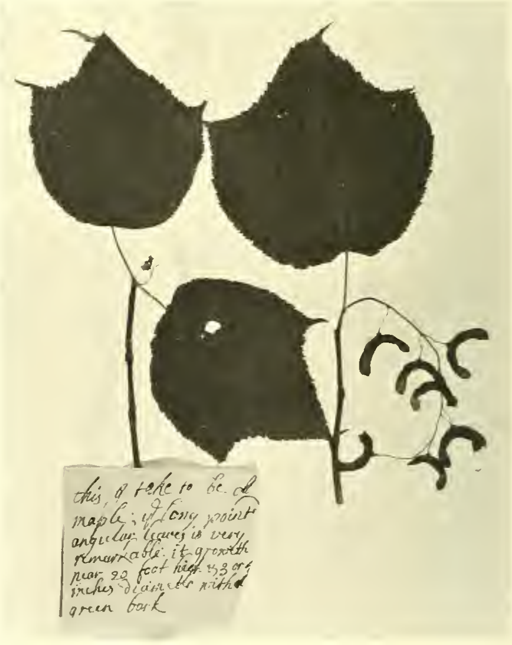
Gentian (*Gentiana porphyrio*)


this we call sweet fern
from its similitude to that
plant ye root is a wonderfull
astringent for stoping of bloo

Sweet-Fern (*Comptonia peregrina*)



Holly (*Ilex opaca*)



Striped Maple (*Acer pensylvanicum*)

Dried plant specimens collected by John Bartram are preserved in the British Museum. Albums of them made by Lord Petre in England survive today in the Sutro Library in San Francisco (see p. 26).

Horticulture in Early Philadelphia

An early and vigorous proponent of horticulture in Pennsylvania was William Penn, the many-sided founder of the state, who wrote, "the Country is to be preferr'd, for there we see the Works of God; but in Cities little else but the Works of Men. And one makes a better Subject for our Contemplation than the other." In a document of 1681, Penn recommended "that in clearing the ground, care be taken to leave one acre of trees for every five acres cleared; especially to preserve the oak and mulberries for silk and shipping." In his letter to the Free Society of Traders he commented: "The Woods are adorned with Lovely Flowers, for Colour, Greatness, Figure and Variety: I have seen the Gardens of London best stored with that Sort of Beauty, but think thay may be improved by our Woods. I have sent a few to a Person of Quality this year [1683] for a Tryal." On his return to England he sent back to his beloved "woodlands" walnut, hawthorn, hazel, fruit trees in variety, and seeds and roots. Penn's "fine green Countrie Towne" of Philadelphia was planned with open squares. A city lot was given to every man who would undertake a farm, and planting of ornamentals was encouraged to accompany the growing of fruits and grain.

Independence Square was the first landscaped public park in Philadelphia, and in 1735 the City Assembly passed an act declaring that the State House yard "shall be enclosed and remain a public green and walk forever." Samuel Vaughan, a wealthy Philadelphia industrialist, later proposed that a specimen representative of each of several states of the country be planted on the State House grounds. The plan never materialized, but Vaughan later made a significant contribution to American horticulture by financing the publication of Humphry Marshall's *Arbustum Americanum* (No. 6).

The history of public landscaping in Philadelphia is not without its reverses. Scarcely a century after Penn's admonition to conserve trees, some city dwellers worried about the prevention of air flow. In 1782 the Corporation of Philadelphia ordered all trees in the streets cut because they obstructed "the prospect and passage through the public streets, . . . watercourses, and operation of the fire engineers." Fortunately, the orders were not carried out. Francis Hopkinson, a signer of the Declaration of Independence, successfully championed the trees:

"I hope to convince the Honorable House that trees, as well as men, are capable of enjoying the rights of citizenship, and therefore, ought to be protected in these rights, that having committed no offense, the arbitrary edict cannot constitutionally pass against them."

The colonists' reliance on English horticulture is illustrated by the appearance in Philadelphia in 1692 of an *Almanack* by Daniel Leeds. In the planting instructions English gardening customs were transplanted unchanged in spite of a different climate. In February gardeners were advised to "sow English Peases, Beans, and Onions. . . . If the month prove wet 'tis not unseasonable . . . [to] sow all sort of hardy Seeds, as Parsnips, lettice, spinnage, etc. . . ." Leeds's *Almanack* for 1695 includes a table of optimum dates for harvesting herbs (when the planets governing them are particularly strong).

Literature was an important horticultural link between England and America. James Logan, William Penn's secretary, who later served as Chief Justice and acting Governor of the province and established a considerable reputation as a botanist, ordered from England a copy of John Parkinson's herbal of 1629 titled *Paradisi in sole paradisus terrestris, A Garden of all sorts of pleasant flowers which our English ayre will permit to be noursed up; . . . together With the right orderinge planting and preserving of them and their uses and vertues*. This was the book he chose to give to John Bartram, a farmer turned botanist, as a help in identifying plants that he collected in the wilderness. Presumably Parkinson's work was helpful to Logan, too, but it would be misleading to think that Logan relied wholly on herbals. We know that in 1736 he wrote to John Bartram from his home Stenton (18th at Courtland) that he had received from the London merchant and horticulture enthusiast Peter Collinson six "very large sheets," the folio first edition of Linnaeus's epochal *Systema naturae* of 1735. "I would send it to thee," wrote Logan, "but being in Latin, it will want some explanation. . . . If thou wilt step to town tomorrow, thou wilt find me there with them, at E. Shippen's, or J. Pemberton's from 12 to 3." Logan also owned a copy of Linnaeus's *Critica botanica* (Leiden, 1737), and presented another to John Bartram in 1739.

Logan's report of his experiments confirming sexuality in maize, published in the

Royal Society's *Philosophical Transactions* in 1735, brought recognition that Americans were contributing to science. And his friendship and help meant much to John Bartram, who bought land on the Schuylkill River in 1728 and soon began the garden that came to hold the outstanding collection of American plants in the colonies. Bartram's botanic garden, combined with his acute observation and accurate memory, made his name known to all botanists here and abroad.

John Jackson established a botanic garden at London Grove in Chester County, Pennsylvania, in 1776 or 1777. Jackson, "an excellent gardener and highly respectable Botanist," had a small greenhouse, and grew both native and exotic plants in a limestone valley "of extraordinary beauty and fertility." Jackson's place in Pennsylvania horticulture rests wholly on his manuscript records in the Chester County Cabinet of Natural Science, West Chester, founded by William Darlington (No. 19), a physician and botanist. Jackson is representative of the many quiet figures who were highly regarded in their rural communities, but passed unnoticed on the larger scene because communication was poor and slow.

In contrast stands Benjamin Franklin whose horticultural interests, although minor, were important. His friendship with John Bartram and his success in arranging exchanges of seeds and roots between French and American gardeners are well documented. Franklin owned and used Philip Miller's *Gardener's Dictionary*, the most important horticultural work in England at that time. His botanical interests were largely economic. Among Franklin's introductions to this country were rhubarb, the European yellow willow (*Salix vitellina*) for making osier baskets, and the cabbage turnip or kohlrabi for its keeping qualities. Humphry Marshall dedicated his *Arbustum Americanum* (No. 6) to Franklin, and the beautiful *Franklinia alatamaha* named by William Bartram is a living memorial.

Enthusiastic about apples, Franklin had a barrel of Green Newtowns sent to him in London in 1759; he shared them with Peter Collinson. Some "North American apples" were also shared with Joseph Banks and taken by him on Captain Cook's first voyage. When the *Endeavour* was between Tahiti and New Zealand, a pie was baked of the apples stowed away fourteen months before. The apples, wrote Banks in his journal, "proved very good; if not quite equal to the apple pies which our friends in England are now eating."

The Swedish botanist Peter Kalm, who visited America from September, 1748 until February, 1751, wrote: "Mr. Benjamin Franklin, to whom Pennsylvania is indebted for its welfare and the learned world for many new discoveries in electricity, was the first who took notice of me and introduced me to many of his friends." Before coming to this country, Kalm had visited Peter Collinson and his circle in London. After two and a half years in America, he recorded his impressions in his *Travels*, available today in English translation.

Kalm's comments are exceptional for their honesty, precision, and delightful detail. He had been in Philadelphia only a week when he had this to say about fuel shortages, on September 22, 1748:

"The woods with which Philadelphia is surrounded would lead one to conclude that fuel must be cheap there. But it is far from being so, because the great and high forest near the town is property of some people of quality and fortune, who do not regard the money which they could make of them. . . . Everybody complained, that fuel, in the space of a few years, was risen in price to many times as much again as it had been and to account for this, the following reasons were given: The town is increased to such a degree as to be four or six times bigger and more populous than what some old people have known it to be when they were young. Many brick kilns have been made hereabout, which require a great quantity of wood. The country is likewise more cultivated than it used to be, and consequently the great woods have been cut down for that purpose; and the farms built in those places likewise consume a quantity of wood. Lastly, they melt iron out of the ore in several places about the town, and this work always goes on without interruption. For these reasons, it is concluded, in future times Philadelphia will be obliged to pay a great price for wood."

Not all of the new nation's horticultural connections were with England. From Germany in 1683 came the learned Francis Daniel Pastorius—lawyer, linguist, and gardener—to establish the first German settlement in America. His Frankfurt company's Germantown became a horticultural center, and traces of their gardens remain, as at Grumblethorpe and Wyck. In 1694 a chapter of Pietist mystics led by Johannes Kelpius settled in the Wissahickon woods and there had "an experimental garden for the study of plants." In 1786 the Lutheran church, changing from German to the English language, included in its litany: "and since it has pleased Thee chiefly by means of the Germans to transform this State into a blooming garden . . . help us not to deny our nation."[1]

An early nineteenth-century visitor from Portugal was Correa de Serra, Portuguese diplomat, a patron of Thomas Nuttall (No. 17), and the first lecturer to introduce Jussieu's Natural System of Plant Classification to an American audience. Another Portuguese visitor was the naturalist Hippolyto Jose da Costa. On February 24, 1799, he dined with William Hamilton, a "learned man very much taken with the subject of botany . . . in [whose] hothouse [grew] many plants from China and Brazil, including fifteen species of sensitive plant and many other kinds of mimosa. . . . I will make a catalogue of all the plants he has. He also has tea trees, jambo trees, guavas, etc."[2] During five visits to Hamilton's garden da Costa asked a "catalogue of questions."

Da Costa's list has never come to light, and we have only the sketchiest information about Hamilton's collection at the Woodlands, his estate on the bank of the Schuylkill in Philadelphia. However, we know that he received five ginkgoes from Peter Collinson. One of his plant introductions, perhaps his most famous, was the Lombardy poplar brought to this country in 1784 and widely planted as a street tree. An early "accidental import," the poplarworm, attacked the trees and terrified citizens with their reputedly poisonous bite. Lombardy poplars went down by axe and by worm, and lindens took their place. With almost allegorical choreography another worm came and ate the linden leaves. These worms "annoyed persons walking under them while spinning their threads," and were generally "offensive in appearance." By 1881 the introduction of English sparrows together with the removal of the linden almost exterminated the caterpillars. The fashion in street trees next turned to maples, ailanthus, horse chestnut, and buttonwood.

Seeds and plants were transported from North America to England, and in many cases passed on to France, Holland, Germany, and Italy. The first knowledge of any Pacific coast plants to reach the Continent was derived from the 1581 visit of the Flemish botanist Clusius with Sir Francis Drake, who had made landfalls at Chile, Peru, Mexico, and California in 1578–79. Sassafras was one of Drake's enthusiasms although it may have been known earlier.

Knowledge of the American novelties penetrated European horticulture by two avenues: the fraternity of botanical gardens, institutional and private; and royalty or those acting in their behalf. In the transit of plants and knowledge about them, for example, the English herbalists Gerard and Tradescant grew, in their gardens in Holborn and South Lambeth, American imports which finally reached Blois, Montpelier, Leiden, St. Petersburg, Padua, and Rome.

A number of English nurseries were active in this traffic, particularly Gordon's, Lee and Kennedy, and Loddiges. Typical of the interchange is an April, 1773, order filled by Gordon's Nursery on Bow Road near London for David van Royen in Leiden.[3] In the "basket of plants" were sent American *Magnolia virginiana*, *Kalmia latifolia*, *Kalmia angustifolia*, and *Rhododendron maximum*. Six months later William Gordon notified van Royen that he was sending "Canada maple with striped bark," *Stewartia*, and *Rhodora*.

After the American Revolution direct transaction with French gardeners increased notably. Novelties often passed through many hands. William Bartram's (No. 8) Florida discovery, *Illicium parviflorum*, collected by André Michaux and sent to the royal gardens, eventually reached nurseries of Cels in Paris.

The immigration of gardeners trained in Europe was an important factor in the early development of American horticulture. David Landreth (No. 18), who came to Philadelphia in 1781 and established the first Philadelphia nursery and seed business in 1784, attracted Irish and English plantsmen in the succeeding decades. Though unconfirmed, it is probable that Landreth was Bernard M'Mahon's (No. 13) first employer after his arrival in the United States from Ireland in 1796. In 1802 M'Mahon established his own business at 129 Chestnut Street, Philadelphia, and issued a broadside measuring 18 by 23 inches, captioned a *Catalogue of Garden, Grass, Herb, Flower, Tree & Shrub-seeds, Flower Roots, &c.* He appended generic and specific names and the plant classification according to Linnaeus to the common names "for the use of such *Ladies*, *Gentlemen*, and *Gardeners*, as wish to become scientifically acquainted with the Plants they cultivate." M'Mahon was on friendly terms with Thomas Jefferson and was entrusted with the seeds brought back from the Lewis and Clark Expedition (1803–6). He wrote Jefferson, December 24, 1809, "I never yet parted with any of [Lewis's] plants raised from his seeds, nor with a single seed the produce of either of them, for fear they should make their way into the hands of any Botanist, either in America, or Europe, who might rob Mr. Lewis of the right he had to first describe and name his own discoveries, in his intended publication." True to his trust, M'Mahon did not reveal these novelties in his *American Gardener's Calendar* of 1806. This *American Gardener's Calendar* (No. 13) was the first authoritative book on all branches of gardening published in the United States, a book described in the newspaper obituary of M'Mahon in 1816 as "a precious treasure" which should "occupy a place in every house in this country; its principles are eternal, and its instruction fruitful of knowledge." Eleven editions were published, the last in 1857, a remarkable public sale inasmuch as the book was not illustrated until the last edition. Copies of the fifth and sixth "editions" are wholly unknown. For book collectors this presents quite a challenge.

The English landscape architect and horticulturist John Claudius Loudon said that between 1800 and 1810 of the ninety-four trees and shrubs introduced into English gardens from America, John Lyon, a Scot, had imported nineteen, the largest number. Lyon's date of arrival in the United States is uncertain, but he was a gardener for William Hamilton at the Woodlands, probably before 1799. At the time, Hamilton's garden was acknowledged as the finest collection in America for its variety and beauty. For almost the last decade of Lyon's short life—he died at forty-nine—he tramped the hills and climbed the mountains of the Carolinas, Georgia and Tennessee searching for trees and shrubs to take back to England for eager buyers.

Lyon made two trips across the Atlantic and kept a record of his customers and the prices his nursery stock fetched. In his journal, not published until 1963, he tells how on June 3, 1803, he found "6 or 8 full grown trees" of *Franklinia alatamaha* growing near Fort Barrington, Georgia; he was the last person known to have seen it in the wild. We know that Lyon took his meals with Landreth when working at his Philadelphia headquarters from such journal entries as the one for December 22, 1813: "Paid Mr. D. Landreth for one years board due this day—$156—." After Lyon's death his nursery, described as "excellent, and very rich in southern plants" by botanist and navy doctor William Baldwin, was left in the hands of Landreth.

The number of described American plant species nearly doubled between 1803, when André Michaux published his *Flora*, and 1814, when Frederick Pursh published his, and had again doubled by 1818, when Nuttall's *Genera* (No. 17) appeared. Notably, these three milestone publications were by foreigners. In 1821, youthful Caleb Cushing wrote a long essay review of Jacob Bigelow's *American Medical Botany* (No. 16), in which he expressed his concern that too few American botanists were actively studying the plant life of their country. "The task of investigating our botany has, in times past, been too much abandoned to the zeal and curiosity of foreigners, and with a few honorable exceptions, while we ourselves were devoted to the more profitable employments of commerce and agriculture, a Catesby, a Kalm, a Michaux, or a Pursh was reaping a harvest of fame on our soil, and teaching us to admire the grandeur of our majestic forests and luxuriant savannahs."[4]

As the frontier receded, gardeners placed increasing emphasis on cultivation and development of ornamental species and varieties. Early in the nineteenth century two shrubs, often grown in pots or tubs, vied with each other for popular esteem: the camellia and the azalea. Camellias had been brought out of China; azaleas, from the Southern states. A collection of Southern azaleas grown in the old Landreth nursery was enriched by contributions from an eccentric German, Mathias Kinn. Looking more like an itinerant tramp than a knowledgeable plantsman, Kinn had an uncanny eye for the unusual. He also brought magnolias to Philadelphia from the southern Appalachians. Baldwin tells of meeting this "curious botanist" in Savannah in January, 1812, as Kinn was setting out by sea with packets of seeds and plants. With the death of Kinn in 1825 an era of plant hunting was over; John and William Bartram, André and François Michaux, Lyon, Pursh, Baldwin, and Kinn had all been botanizing in the fields of asphodel. But the camellias and azaleas lived on and their popularity increased through decades of exceptional interest in hybridizing.

The plant lover often finds that changes in garden favorites are reflected in paintings. For example, Rembrandt Peale drew his brother Rubens holding a flowering geranium in a painting dated 1801. To the historian of horticulture this is pictorial evidence of the popular garden flower's state of development in the United States at the turn of the century. Geranium seed is said to have been sent to John Bartram by Collinson in 1760, but Rembrandt Peale's picture is the first confirmation that geraniums were being grown in this country. It is also the first pictorial record of a plant imported to America. Further evidence of the geranium's popularity may be inferred from the fact that M'Mahon provided instructions for their care in no less than five places in his 1806 *American Gardener's Calendar* (No. 13). Grant Thorburn, a colorful Scot, nailmaker of Dalkeith turned seedsman, launched his plant business in New York City in 1804 with the sale of flowering geraniums after he found that they sold better than empty flower pots. In *Thomas Jefferson's Garden Book* there are references to geraniums and an exchange of letters in 1809 documents his interest in them.

As the country grew, Western natives were added to the Eastern collections. Persifor Frazer's gift of salmonberry (*Rubus spectabilis*) seed to the Pennsylvania

Horticultural Society was typical of the times. Salmonberry was discovered by Lewis and Clark in 1806 and described by Pursh, but it was not until 1854 that Frazer sent the seed from Bodega Bay, north of San Francisco, the site of the Russian Fur Company's outpost. A far-flung contact with Russian America was represented by these "dried raspberries" from Sitka. Undoubtedly Dr. William Brincklé's (No. 28) fascination with small fruits added special interest to Frazer's gift.

One of the values of horticultural societies is the stimulus they offer amateurs to test wild species, "botanicals," in the garden. Sometimes these wildlings were little known, even to botanists among the membership. R. Robinson Scott, editor of the *Philadelphia Florist and Horticultural Journal* (No. 30), tells us of a meeting of the Pennsylvania Horticultural Society on June 19, 1852, when the "grower put the specimen . . . in my hands to name. I therefore, subject of course to revision of Professional Botanists, of whom I am not one, would call it *Phacelia setosa*, bristly Phacelia, or Caterpillar Plant." Scott had handled "Stinging Phacelia" of California (*Phaecelia malvifolia*).

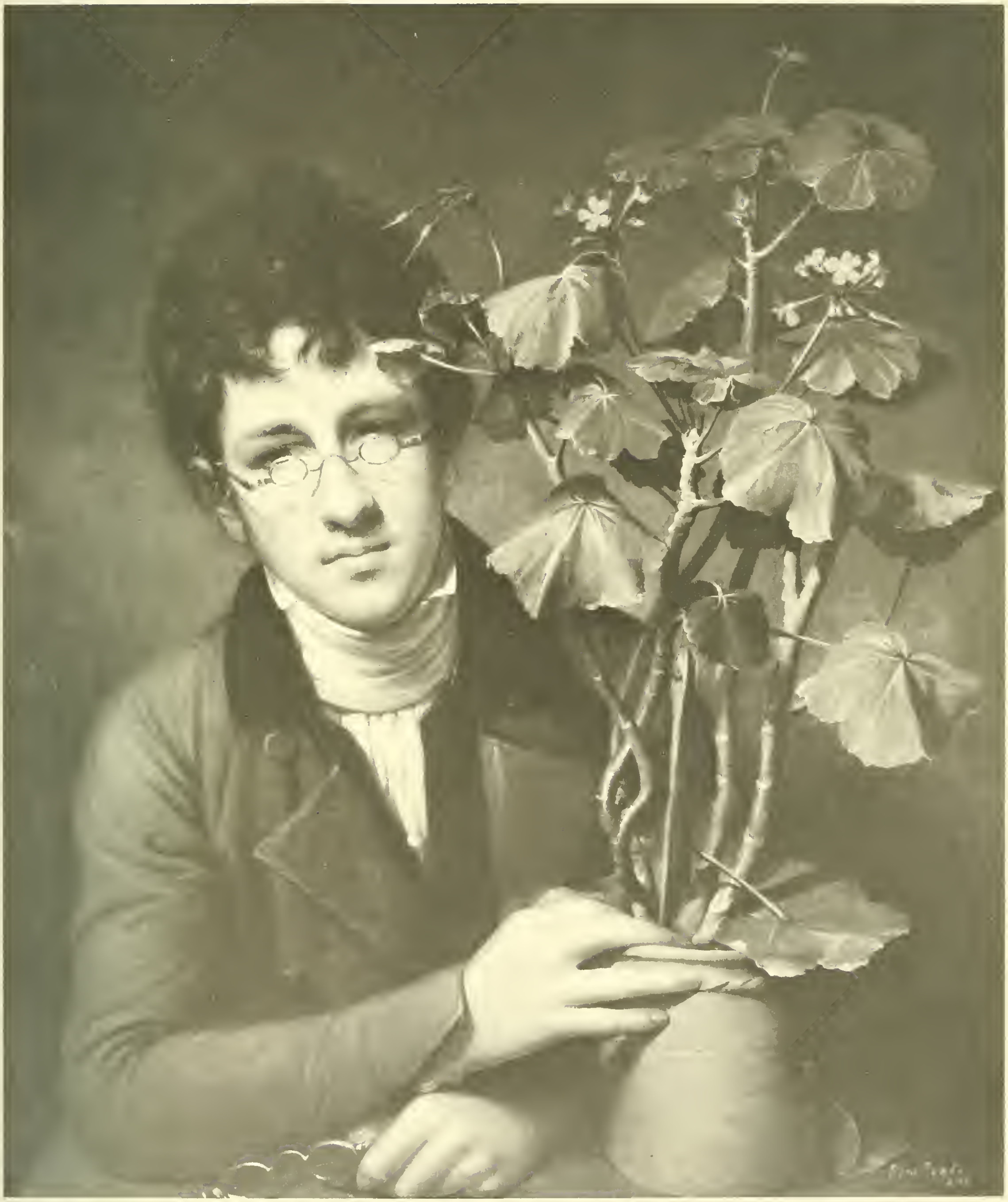
Unfortunately, as new favorites were taken up, old ones were lost. What dahlia fancier today can tell us anything about the appearance of the dahlia that Gerhard Schmidtz of the Pennsylvania Horticultural Society named after its fourth president, Caleb Cope, who served from 1842 to 1851? If the plants themselves are lost, information about them is often preserved in nursery catalogues—a number of which have survived. John Harvey, the British architect, archivist, and historian, stressed the importance of catalogues in his *Early Gardening Catalogues* (1972). He commented that such literature, "commercial, empiric and ephemeral," with a "limited period of obvious utility," is afterwards "discarded wholesale." "This is intelligible, but unfortunate," wrote Harvey, "for a great deal more of everyday life, human interest, and social history is contained in this great body of ever-changing and continually destroyed writings and printings than might at first be supposed."

Lists issued by nurserymen and seedsmen before 1800 in England and before 1850 in the United States are extremely rare. A few examples: Conrad Loddiges at Hackney near London offered seeds of North American trees and shrubs. Two copies of his 1783 *Catalogue* have been located, one here and one abroad. One copy is known of Minton Collins's Virginia broadside dated Richmond, January 24, 1793, entitled *Garden and Grass Seeds, with a choice collection of Flower Roots, & Seeds, Just Imported.*[5] Before 1800 John Lithen, "nursery and seedsman, South-Side of

Centre-Square, Philadelphia," issued a *Catalogue of Garden Seeds, Flower-Roots, Fruit and Forest-Trees, Evergreen and Flowering Shrubs &c*, of which one copy is known.[6] Only three copies of the broadside *Catalogue of American Trees, Shrubs and Herbacious Plants*, sold at "John Bartram's Garden near Philadelphia," issued in 1783 by son John, have been located (No. 4). One copy of the French translation of the same year has also survived.[7] A special puzzle is a broadside entitled *Catalogue of Botanical, Gardening & Agricultural Books for sale by Bernard M'Mahon, Seedsman, no. 129 Chestnut Street, Philadelphia*;[8] Professor Benjamin Smith Barton used the back of the top half for a scratch memorandum, so we have only half the story!

Herbarium records provided another way in which eighteenth-century horticultural information has been preserved. For example, dried plant specimens made by John Bartram are preserved in the British Museum and albums of them made by Lord Petre in England survive today in the Sutro Library in San Francisco. These Petre albums were acquired by Adolph Sutro, book collector, mining engineer, and mayor of San Francisco in the late nineteenth century. Bartram plants collected in the 1730's in the Sutro albums include groundsel bush from "Cape May," sweet fern, moosewood, ginseng, and "beech plum." There is a gentian (*Gentiana porphyrio*) of which Bartram wrote, "this curious flower gathered in ye desert as I came from Cape May it is peranuall [sic]," thus revising the story told by Witmer Stone that it was William Bartram who discovered the plant as a lad.

In this day of concern with agricultural chemicals, no essay on the roots of our horticulture would be complete without a look at the early attempts to control pests. They were primitive, as were the colonists' ideas about the nature and causes of their troubles. Epidemics of apple scab and peach yellows were said to be caused by "morbid infections of the air." Pear blight was a "vegetable apoplexy" resulting from "a surcharge of electric fluid." Its logical remedy was old horseshoes, hoops of iron, pieces of wire, or any metal hung in branches that would conduct "floating electric fluid" away. In 1837 the Pennsylvania Horticultural Society offered five hundred dollars for a cure for pear blight. Entries included suggestions for wrapping the branches with rags soaked in brimstone (sulfur), driving nails into the trunk as an iron tonic, drenching the ground with soapsuds, and poking calomel (mercurous chloride) beneath the bark. No award was made. In 1824 the *American Farmer* published a note from a man who had discouraged bugs in his orchard by wrapping

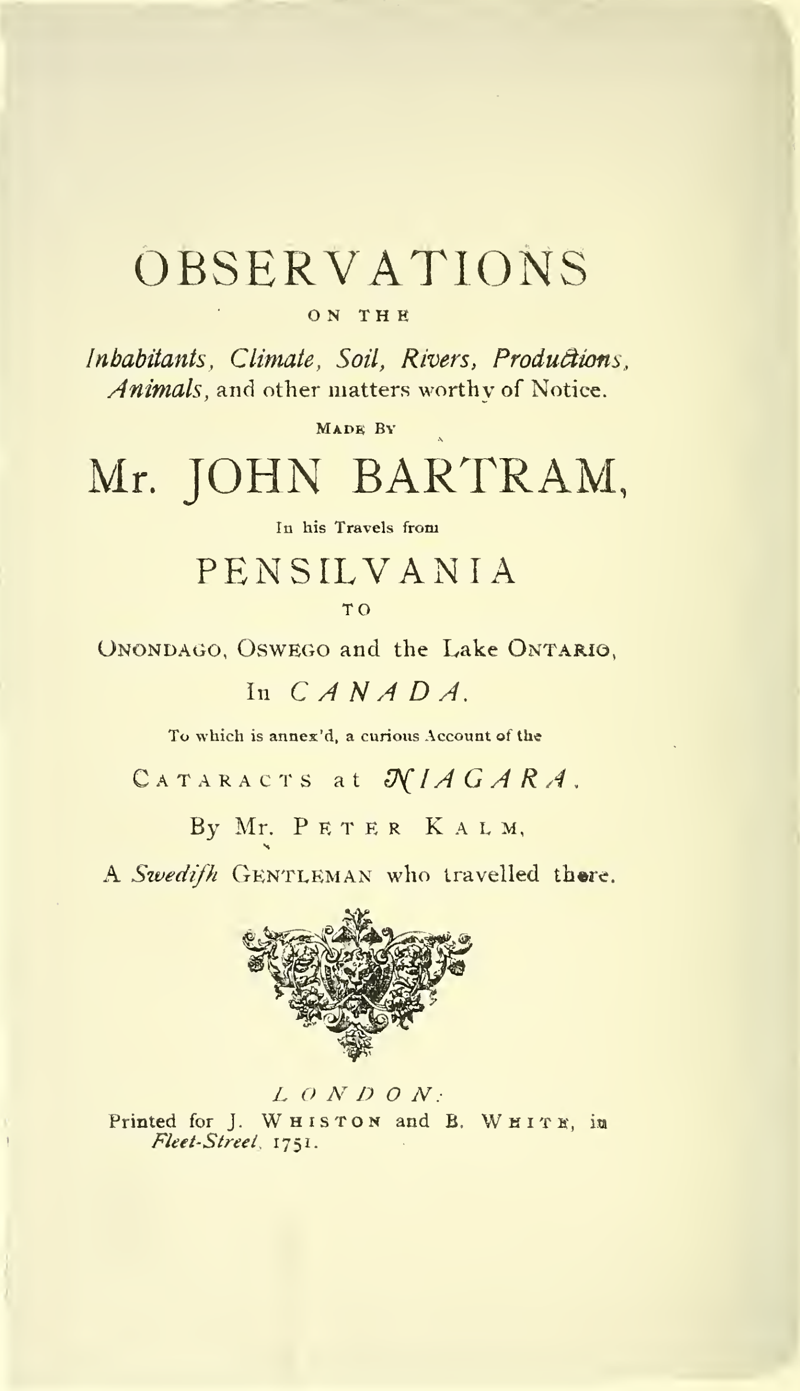


"Rubens Peale with a Geranium, 1801" by Rembrandt Peale (courtesy of Mrs. Norman B. Woolworth).

the trunks in tobacco. He was remarkably close to discovering a real insecticide.

Perhaps nothing better illustrates the importance of horticulture in early Philadelphia than the founding of the Pennsylvania Horticultural Society in 1827. Many of its founders and early members are mentioned in the books presented in this exhibit. It is particularly fitting that the Society should recall these people on the occasion of the country's bicentennial.

From Seed to Flower



OBSERVATIONS

ON THE

Inhabitants, Climate, Soil, Rivers, Productions, Animals, and other matters worthy of Notice.

MADE BY

Mr. JOHN BARTRAM,

In his Travels from

PENSILVANIA

TO

ONONDAGO, OSWEGO and the Lake ONTARIO,

In *CANADA*.

To which is annex'd, a curious Account of the

CATARACTS at *NIAGARA*.

By Mr. PETER KALM,

A *Swediſh* GENTLEMAN who travelled there.

LONDON:
Printed for J. WHISTON and B. WHITE, in
Fleet-Street, 1751.

1 *Observations &c.*

JOHN BARTRAM, LONDON, 1751.

No. 267 of three hundred copies reprinted for George Perkins Humphrey, Rochester, N.Y., 1895.

The *Observations* is an account of a trip John Bartram took in 1743. The original manuscript that Bartram sent to Peter Collinson the next year was lost when the ship carrying it was captured by the French. Bartram sent a second copy to Collinson who had it printed in 1751. Unlike many of his journals, *Observations* deals less with plants and more with the country through which Bartram traveled. His companions were Lewis Evans, the noted mapmaker, and Conrad Weiser, the official interpreter to the Indians for the Province of Pennsylvania.

John Bartram was a self-educated farmer whose early interest in plants led him to become the leading and by far the most influential of the early American botanists. The plants brought back from his many collecting trips were planted in his garden on the Schuylkill. As there were then no records it is impossible to know how many plants were first discovered and introduced by John Bartram, but it is probable that the list would be lengthy.

Peter Collinson, an English Quaker, eager for American plants, became Bartram's friend and agent, receiving and distributing to other English gardeners boxes of plants and "curiosities" shipped at intervals with descriptions.

On the annals of the American Philosophical Society Bartram's name follows that of its founder, Benjamin Franklin. Bartram was an intimate friend of Franklin's. He corresponded with the most important botanists of the times and his garden was a mecca for early naturalists.

Anyone reading of American botany realizes the extraordinary influence of John Bartram, collector and botanist, followed by two of his sons: William, author of the *Travels*, and John, Jr., the proprietor of Bartram's garden when it became a nursery.

The only other journal kept by Bartram known to exist is the diary of his journey through the Carolinas, Georgia and Florida. It was published in the *Transactions of the American Philosophical Society*, 1942 and 1943.

TRANSACTIONS
OF THE
American PHILOSOPHICAL SOCIETY.

SECT. II.

ESSAYS ON AGRICULTURE.

An ESSAY on the cultivation of the VINE, and the making and preſerving of Wine, ſuited to the different Climates in *North-America*. By the Hon. EDWARD ANTILL, Eſq; of *New-Jerſey*. Communicated to the Society

By CHARLES THOMSON, with the following Extract of a Letter to him.

DEAR SIR,

I *HAVE at laſt, after many hard ſtruggles, and many a painful hour, labouring under a tedious diſorder, finiſhed the eſſay on the cultivation of the Vine, &c. which I now ſend you.*

Nothing but the love of my country and the good of mankind could have tempted me to appear and expoſe myſelf to public view. I have, to the utmoſt of my ſkill and knowledge, endeavoured to lay open and explain every part of this undertaking, yet new to America; though an undertaking as antient at leaſt as the days of Noah; and yet what ſeems ſtrange to tell, it is an art that has not yet arrived at perfection, but is ſtill viſibly capable of ſome eſſential improvements: That America ſhould give the finiſhing ſtroke at laſt to a

2 *An Essay on The Cultivation of the Vine*

EDWARD ANTILL, American Philosophical Society Transactions,
1:117–197, PHILADELPHIA, 1771.

Edward Antill, farmer, judge, justice of the peace, and lottery inspector, wrote the first account of grape-growing published in America. His essay, widely read, was popular and important for fifty years until John Adlum wrote the first book on the subject, *Memoir on the Cultivation of the Vine*, in 1823.

Antill was the orphaned son of a New York merchant. Adopted by a sea captain, he inherited a fortune derived from privateering, and invested it in a New Jersey farm at Raritan Landing opposite New Brunswick. He served two years in the New Jersey Assembly, but his greatest enthusiasm was for grape-growing.

Antill urged the cultivation of grapes for drinking rather than eating. He grew French and Italian varieties and shipped the wine he made to England. His efforts, however, met with indifferent success among his own countrymen, though he won a premium of £200 offered by the Society for Promoting Arts, Manufactures, and Commerce of London for his viticulture report and was elected to the American Society for Promoting and Propagating Useful Knowledge in 1768.

That same year Antill was elected to the American Philosophical Society in Philadelphia. His manuscript on the cultivation of vine grapes was published by the Society in the first volume of its *Transactions*, 1771. He reported on his own meager experience and quoted freely from ancient and modern writers: from the classical writings of the Roman Columella in the first century to his contemporary, Philip Miller of the Chelsea Physick Garden.

Antill begins his essay joyously: "The Vine, if considered in its full extent of pleasure, profit and usefulness to Man, challenges next to what affords us Bread, the chief place among the vegetable creation. . . ." His rambling essay stimulated patriotic and religious thoughts, as well as interest in grape-growing, an industry "yet new to America, though an undertaking as ancient at least as the days of Noah."

The cultivation of grapes became so popular that over one hundred books were written on viticulture between 1771 and 1900.

CHAP. VI.

SEEDS, ACORNS, BERRIES, CONES, &c.
OF
Foreſt-trees, Evergreens, American Trees,
AND
FLOWERING SHRUBS.

ACACIA.
GLEDITSIA.

Triple-thorned	ſpinoſa

ACACIA, (the Falſe)
ROBINIA.

Falſe Acacia	Pſeudo Acacia
Scarlet	coccinea

ALLSPICE.
CALYCANTHUS.

Carolinian	florida.

ANDROMEDA.
ANDROMEDA.

Calyculated	calyculata
Ovate-leaved	mariana
Crenated-leaved	paniculata
Roſemary-leaved	Polifolia

ANNONA.
ANNONA.

Annona or Papaw	triloba

ARBOR-VITÆ.
THUJA.

Common	occidentalis
Sweet-ſcented	*occid. odorata*
Chineſe	orientalis

ASH-TREE.
FRAXINUS.

Engliſh	excelſior
Virginian	paniculata
Carolinian	americana
New-England	alba
Black	nigra
Penſylvanian.	penſylvanica

AZALEA.
AZALEA.

Red	nudiflora
White	viſcoſa

BAY-TREE.
LAURUS.

Common	nobilis

DOGWOOD.
CORNUS.

Virginian	florida
Narrow-leaved	anguſtifolia
Blue-berried	Amomum

ELDER-TREE.
SAMBUCUS.

Canadian	canadienſis
Scarlet-berried	racemoſa

FIR-TREE.
PINUS-ABIES.

Yew-leaved Silver	alba
Hemlock Spruce	americana
Balm of Gilead	Balſamea
Newfoundl. white	canadenſis
Newfoundl. black	*can. nigricans*
Newfoundl. Red	*can. rubeſcens*
Norway Spruce	Picea
Long-coned Corniſh	Pic. longa

HAWTHORN-TREE.
CRATÆGUS.

Hawthorn	Oxyacantha
Yellow-berried	*Oxy. bacciflava*

HICKERY-NUT-TREE.
JUGLANS.

White	alba
Small	minor
Shag-barked	ovata
Pignut	minima

HORNBEAM-TREE.
CARPINUS.

Common	Betulus
Hop	Oſtrya
Virginian	virginiana

HORSE-CHESNUT-TREE.
ÆSCULUS.

Common	Hippocaſtanum
Scarlet-flowered	Pavia

JUNIPER-TREE.
JUNIPERUS.

Common	communis
Swediſh	ſuecica

JUDAS-TREE.
CERCIS.

Canadian	canadenſis
European	Siliquaſtrum
White European	*Siliq. album*

KALMIA.
KALMIA.

Narrow-leaved	anguſtifolia
Broad-leaved	latifolia

LABURNUM.
CYTISUS-LABURNUM.

Broad-leaved	latifolium
Narrow-leaved	anguſtifolium

LARCH-TREE.
PINUS-LARIX.

Common	Larix

LAUREL-TREE.
PRUNUS-LAURO-CERASUS.

Common	Lauro-Ceraſus
Portugal	luſitanica

LILAC.
SYRINGA.

White	vulgaris alba
Blue	*vulg. cærulea*
Purple	*vulg. purpurea*

LIME-TREE.
TILIA.

Common	europea
American	americana
Carolinian	caroliniana

3 *The English Flora*

RICHARD WESTON, LONDON, 1775.

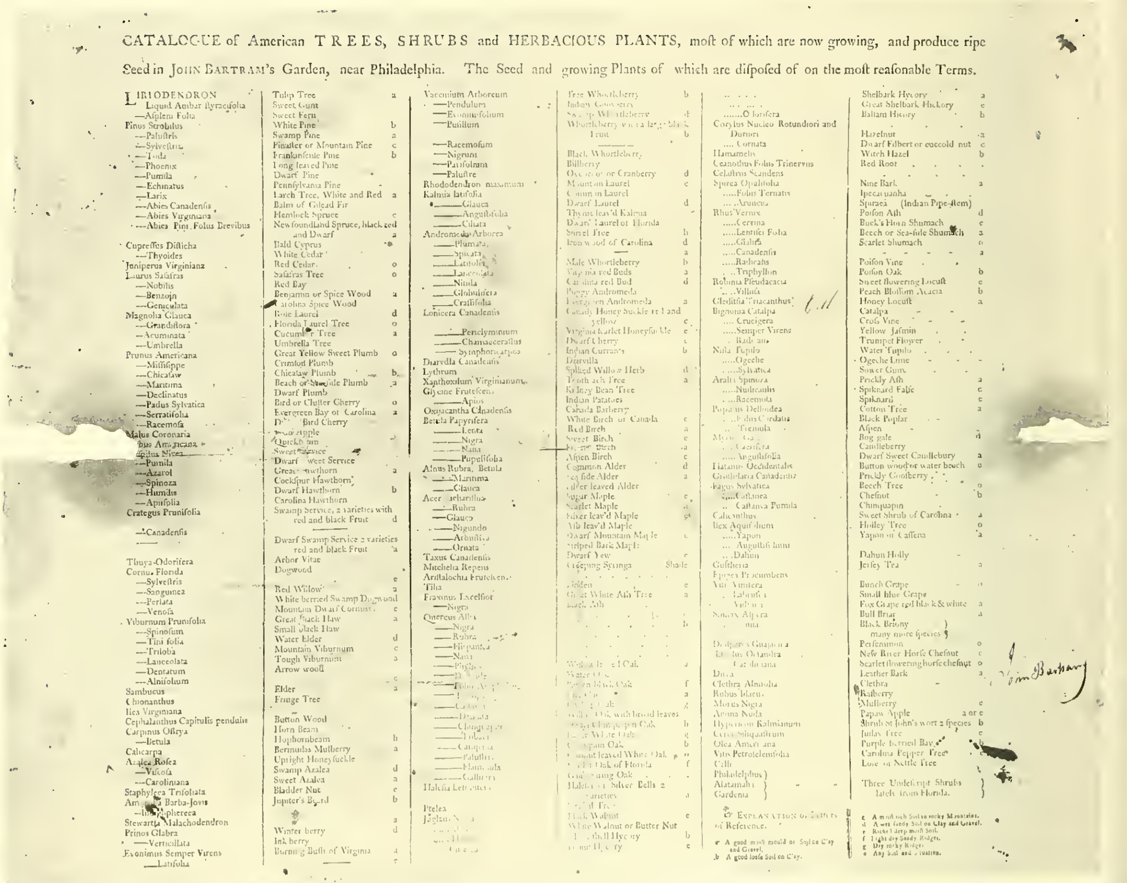
Richard Weston, a prolific agricultural writer, identified himself as a "country gentleman" on the title pages of various tracts. However, he appears to have been a thread-hosier from Leicester where he was secretary of the local agricultural society.

His *English Flora* appeared during the American Revolution, ahead of the broadside sales catalogues of John Bartram, Jr., that began to appear in the next decade. A chapter entitled "SEEDS, ACORNS, BERRIES, CONES & etc., Forest-trees, Evergreens, American Trees, and flowering shrubs" indicated an interest in American horticulture.

It is intriguing to consider what may have been the origins of Weston's list of American plants. John Harvey, scholar of English horticulture today, tells us that Weston acquired his bulbs and gooseberries from James Maddock (or Maddox), an enterprising Quaker florist of Walwroth near London. Could it be that Maddock received seeds and roots from that enthusiast for American novelties Peter Collinson, who in turn had been supplied by John Bartram?

We know that a list of nearly one hundred kinds of North American tree and shrub seeds was published by William Borthwick in his *British Gardener's Calendar*, 1759. Even earlier, in 1733, Christopher Gray of Fulham offered American seeds and plants for sale. Weston is but one of the curious connections that link the colonial gardeners to their foreign correspondents and agents.

Weston listed the familiar American plants that had reached England by 1750. He did not offer the exciting discoveries made by William Bartram in his southern travels. Aware that new introductions were slipping into English gardens, Weston invited gardeners to send him accounts of unfamiliar plants for future publication.



CATALOGUE of American TREES, SHRUBS and HERBACIOUS PLANTS, moſt of which are now growing, and produce ripe Seed in JOHN BARTRAM's Garden, near Philadelphia. The Seed and growing Plants of which are diſpoſed of on the moſt reaſonable Terms.

LIRIODENDRON
Liquid Ambar ſtyracifolia
—Aſplen. Folia
Pinus Strobilus
—Paluſtris
—Sylveſtris
—Tæda
—Phœnix
—Pumila
—Echinatus
—Larix
—Abies Canadenſis
—Abies Virginiana
—Abies Pini Folus Brevibus

Cupreſſus Diſticha
—Thyoides
Juniperus Virginiana
Laurus Saſafras
—Nobilis
—Benzoin
—Geniculata
Magnolia Glauca
—Grandiflora
—Acuminata
—Umbrella
Prunus Americana
—Miſſiſippe
—Chicaſaw
—Maritima
—Declinatus
—Padus Sylvatica
—Serratifolia
—Racemoſa
Malus Coronaria
bus Americana
pilus Nivea
—Pumila
—Azarol
—Spinoza
—Humilis
—Apiifolia
Crategus Prunifolia

—Canadenſis

Thuya Odorifera
Cornus Florida
—Sylveſtris
—Sanguinea
—Perlata
—Venoſa
Viburnum Prunifolia
—Spinoſum
—Tini folia
—Triloba
—Lanceolata
—Dentatum
—Alnifolium
Sambucus
Chionanthus
Itea Virginiana
Cephalanthus Capitulis pendulis
Carpinus Oſtrya
—Betula
Calicarpa
Azalea Roſea
—Viſcoſa
—Caroliniana
Staphylæa Trifoliata
Am[illegible] Barba-Jovis
—[illegible]phærea
Stewartia Malachodendron
Prinos Glabra
—Verticillata
Evonimus Semper Virens
—Latifolia

Tulip Tree a
Sweet Gum
Sweet Fern
White Pine b
Swamp Pine a
Pinaſter or Mountain Pine c
Frankinſenſe Pine b
Long leaved Pine
Dwarf Pine
Penſylvania Pine
Larch Tree, White and Red a
Balm of Gilead Fir
Hemlock Spruce c
Newfoundland Spruce, black red and Dwarf a
Bald Cyprus
White Cedar
Red Cedar o
Saſafras Tree o
Red Bay
Benjamin or Spice Wood a
arolina Spice Wood
Roſe Laurel d
Florida Laurel Tree o
Cucum[illegible]r Tree a
Umbrella Tree
Great Yellow Sweet Plumb o
Crimſon Plumb
Chicaſaw Plumb b
Beach or Sea-ſide Plumb a
Dwarf Plumb
Bird or Cluſter Cherry o
Evergreen Bay of Carolina a
D[illegible] Bird Cherry
[illegible]apple
Quickb[illegible]m
Sweet [illegible]rvice
Dwarf [illegible]weet Service
Great [illegible]awthorn a
Cockſpur Hawthorn
Dwarf Hawthorn b
Carolina Hawthorn
Swamp Service, 2 varieties with red and black Fruit d

Dwarf Swamp Service 2 varieties red and black Fruit a
Arbor Vitæ
Dogwood
e
Red Willow a
White berried Swamp Dogwood
Mountain Dwarf Cornus c
Great Black Haw a
Small Black Haw
Water Elder d
Mountain Viburnum c
Tough Viburnum a
Arrow wood
c
Elder a
Fringe Tree

Button Wood
Horn Beam
Hophornbeam b
Bermudas Mulberry a
Upright Honeyſuckle
Swamp Azalea d
Sweet Azalea a
Bladder Nut e
Jupiter's Beard b
a
Winter berry d
Ink berry
Burning Buſh of Virginia a
c

Vaccinium Arboreum
—Pendulum
—Evonimifolium
—Puſillum

—Racemoſum
—Nigrum
—Parvifolium
—Paluſtre
Rhododendron maximum
Kalmia latifolia
—Glauca
—Anguſtifolia
—Ciliata
Andromeda Arborea
—Plumata
—Spicata
—Latifolia
—Lanceolata
—Nitida
—Globulifera
—Craſſifolia
Lonicera Canadenſis

—Periclymenum
—Chamæceraſus
—Symphoricarpos
Diervilla Canadenſis
Lythrum
Xanthoxilum Virginianum
Glycine Fruteſcens
—Apios
Oxyacantha Canadenſis
Betula Papyrifera
—Lenta
—Nigra
—Nana
—Populifolia
Alnus Rubra, Betula
—Maritima
—Glauca
Acer [illegible]acharinum
—Rubra
—Glauca
—Negundo
—Arbuſtiva
—Ornata
Taxus Canadenſis
Mitchella Repens
Ariſtalochia Fruteſcens
Tilia
Fraxinus Excelſior
—Nigra
Quercus Alba
—Nigra
—Rubra
—Hiſpanica
—Nana
—Phellos
—[illegible]
—[illegible]
—[illegible]
—[illegible]
—[illegible]
—[illegible]
—[illegible]
—[illegible]
—Paluſtris
—[illegible]
—[illegible]
Haleſia [illegible]
Ptelea
Juglans N[illegible]
[illegible]

Tree Whortleberry b
Indian Gooſeberry
Swamp Whortleberry d
Whortleberry with a large black Fruit b

Black Whortleberry
Billberry
Oxycoccos or Cranberry d
Mountain Laurel c
Common Laurel
Dwarf Laurel d
Thyme leav'd Kalmia
Dwarf Laurel of Florida
Sorrel Tree h
Iron wood of Carolina d
a
Male Whortleberry b
Virginia red Buds a
Carolina red Bud d
Poggy Andromeda
Evergreen Andromeda a
Canada Honey Suckle red and yellow c
Virginia ſcarlet Honeyſuckle c
Dwarf Cherry c
Indian Currants b
Diervilla
Spiked Willow Herb d
Tooth ach Tree a
Kidney Bean Tree
Indian Patatoes
Canada Barberry
White Birch of Canada c
Red Birch a
Sweet Birch c
[illegible] Birch a
Aſpen Birch c
Common Alder d
Sea ſide Alder a
Alder leaved Alder
Sugar Maple c
Scarlet Maple a
Silver leav'd Maple g
Aſh leav'd Maple
Dwarf Mountain Maple c
Striped Bark Maple
Dwarf Yew e
Creeping Syringa Shade

Linden e
Great White Aſh Tree a
Black Aſh
[illegible]
[illegible] b
[illegible]
[illegible]
[illegible] Oak a
Water Oak
[illegible] black Oak f
[illegible] a
[illegible] Oak g
[illegible] Oak with broad leaves h
[illegible] Oak b
[illegible] White Oak g
[illegible]pain Oak b
[illegible]nut leaved White Oak
[illegible] Oak of Florida f
[illegible] Oak
Haleſia or Silver Bells 2 varieties a
[illegible] Tree
Black Walnut e
White Walnut or Butter Nut
[illegible] ſhell Hyckory b
[illegible] Hyckory c

[illegible]
[illegible]
—O[illegible]ifera
Corylus Nucleo Rotundiori and Duriori
—Cornuta
Hamamelis
Ceanothus Folus Trinervus
Celaſtrus Scandens
Spirea Opulifolia
—Folus Ternatis
—Aruncus
Rhus Vernix
—Cerrina
—Lentiſci Folia
—Glabra
—Canadenſis
—Radicans
—Triphyllon
Robinia Pſeudacacia
—Villoſa
Gleditſia Triacanthus t. d
Bignonia Catalpa
—Crucigera
—Semper Virens
—Radicans
Nyſſa Tupilo
—Ogeche
—Sylvatica
Aralia Spinoza
—Nudicaulis
—Racemoſa
Populus Deltoidea
—Folus Cordatis
—Tremula
Myrica [illegible]
—Cerifera
—Anguſtifolia
Platanus Occidentalis
[illegible] Canadenſis
Fagus Sylvatica
—Caſtanea
—Caſtanea Pumila
Calicanthus
Ilex Aquifolium
—Yapon
—Anguſtifolium
—Dahun
Gultheria
Epigea Procumbens
Vitis Vinifera
—Labruſca
—Vulpina
Smilax Aſpera
—[illegible]

D[illegible] Guajacana
[illegible] Octandra
Caroliniana
Dirca
Clethra Alnifolia
Rubus Idæus
Morus Nigra
Anona Nuda
Hypericum Kalmianum
Cercis Siliquaſtrum
Olea Americana
Vitis Petroſelenifolia
Celtis
Philadelphus
Alatamaha
Gardenia

Shelbark Hyckory a
Great Shelbark Hickory e
Balſam Hickory b

Hazelnut a
Dwarf Filbert or cuccold nut c
Witch Hazel b
Red Root

Nine Bark a
Ipecacuanha
Spiræa (Indian Pipe-ſtem)
Poiſon Aſh d
Buck's Horn Shumach e
Beech or Sea-ſide Shumach a
Scarlet Shumach o
a
Poiſon Vine
Poiſon Oak b
Sweet flowering Locuſt e
Peach Bloſſom Acacia b
Honey Locuſt a
Catalpa
Croſs Vine
Yellow Jaſmin
Trumpet Flower
Water Tupilo
Ogeche Lime
Sower Gum
Prickly Aſh a
Spiknard Falſe c
Spiknard c
Cotton Tree a
Black Poplar
Aſpen
Bog gale d
Candleberry
Dwarf Sweet Candlebury a
Button wood or water beach o
Prickly Gooſberry
Beech Tree o
Cheſnut b
Chinquapin
Sweet Shrub of Carolina a
Holley Tree o
Yapon or Caſſena a

Dahun Holly
Jerſey Tea a

Bunch Grape o
Small blue Grape
Fox Grape red black & white a
Bull Briar a
Black Briony many more ſpecies
Perſimmon o
New River Horſe Cheſnut c
Scarlet flowering horſe cheſnut o
Leather Bark a
Clethra
Raſberry
Mulberry e
Papaw Apple a or c
Shrub St John's wort 2 ſpecies b
Judas Tree c
Purple berried Bay b
Carolina Pepper Tree c
Lote or Nettle Tree

Three Undeſcript Shrubs lately from Florida.

☞ EXPLANATION of Letters of Reference.

a A good moiſt mould or Soyl on Clay and Gravel.
b A good looſe Soil on Clay.
c A moiſt rich Soil on rocky Mountains.
d A wet ſandy Soil on Clay and Gravel.
e Riche[illegible] deep moiſt Soil.
f Light dry Sandy Ridges.
g Dry rocky Ridges.
o Any Soil and Situation.

Jn Bartram

Courtesy of the Historical Society of Pennsylvania

4 *Catalogue of American Trees, Shrubs and Herbacious Plants*

JOHN BARTRAM, JR., PHILADELPHIA, C. 1783.

William Bartram wrote that his father's botanic garden, begun in 1730, was "for the reception and cultivation of the various vegetables, natives of the country, as well as of exotics. . . ." With increasing demands for American seeds and plants, many of them discovered by John Bartram, his garden necessarily evolved into a nursery. John Bartram, Jr., organized the stock after his father's death in 1777 and for the next quarter century issued catalogues. The broadside shown is the first sales catalogue of American plants issued in this country and is undated, but the year of its appearance can be approximated from a French edition dated 1783.

Most of Bartram's customers were Europeans but we know one was a fellow nurseryman, William Prince, who presumably carried on a lively business from his store at 146 Pearl Street in New York City. Bartram wrote to Prince in 1812 that he was shipping him seven items valued at eight dollars, which he invoiced as *Chionanthus*, 6 plants, *Franklinia*, 12, *Calycanthus*, 12, *Hamamelis*, 9, "gardenia multiflora," 1, juniper, 4, and an unrecorded number of "Mandaren oranges." Bartram postscripted "seeds of Bird-Pepper in a paper in the box atop of plants." There is evidence that another of Bartram's customers was William Hamilton of the Woodlands near Philadelphia. Hamilton's outstanding gardens on the outskirts of Philadelphia slipped away unattended after his death.

When John Bartram, Jr., died in 1812, his daughter Ann and her husband, Colonel Robert Carr, took over management of the nursery. Thomas Nuttall mentions in his *Sylva* that while Bartram's garden was under the care of Colonel Carr, a Carolina buckthorn, whose berries persisted into winter until "some famished flock of robins falls upon and strips them nearly at once," had reached twenty-five feet in twenty years. There was also a *Magnolia auriculata* seventy feet tall at the garden, with a trunk two or three feet in diameter.

Another copy of the *Catalogue* is in the Library of Congress.

CATALOGUE
D'ARBRES, ARBUSTES
ET PLANTES HERBACÉES D'AMÉRIQUE.

ARBRES, ARBUSTES.

Acer rubrum.

Cet arbre s'élève à la hauteur de 60 pieds; ſon bois ſert aux ouvrages de tour; c'eſt un bon bois à brûler; il croît lentement, aime un ſol humide & argilleux : ſa sève fournit du ſucre; ſes ſemences périſſent facilement, & il doit être envoyé en plant.

Acer negundo.

C'eſt un très-bel arbre; ſon bois eſt très-beau, très-bon à employer dans la menuiſerie, & il aime les terreins frais.

Acer ſaccharinum.

Cet arbre parvient juſqu'à 80 pieds de hauteur, & à une groſſeur ſurprenante. Il aime un ſol riche & léger, ſon bois eſt bon à brûler, & fournit du ſucre; on m'a dit qu'un gros arbre peut donner juſqu'à 100

5 *Catalogue d'Arbres Arbustes et Plantes Herbacées d'Amérique*

WILLIAM YOUNG, PARIS, 1783.

Facsimile reprint in Botanica Neglecta, *Samuel N. Rhoads, ed. Philadelphia, 1916.*

Competition was rife among the early horticulturists. The elder John Bartram was confronted by a rival in the person of William Young, Jr., who lived on a farm down the road. Young went to London, where he was a pupil of the entrepreneur John Hill, author of numerous popular books on plant lore. He ingratiated himself with royalty and was appointed "Botanist to the Queen" in 1764. Peter Collinson "by repeated solicitations" succeeded in gaining the appointment of "King's botanist" for Bartram. In 1766 Young returned to Philadelphia; Bartram wrote Collinson that "Young cuts the greatest figure in town, struts along the streets, whistling with his sword and gold lace" and that he had come to the garden three times since his return.

The catalogue is the list of plants Young offered for sale in France. Written in French, using a now outmoded system of nomenclature, it is in two parts; the first comprises the plants that Young could himself supply, the second, those available from other sources. He lists many plants from the Carolinas where he had collected extensively.

The fact that Young's catalogue and John Bartram's broadside both appeared in Paris in 1783 is testimony of plantsmen's lively interest in novelties during the decade in which André Michaux began his exploration and introduction of Atlantic coast plants to France.

Young is remembered principally for having delivered seeds and some live plants, notably a water lily and Venus flytrap (*Dionaea muscipula*), to England. Some of his crude colored drawings are in the British Museum (Natural History).

One copy of the *Catalogue* was reported by Rhoads to be in Paris; another copy belongs to the Arnold Arboretum. The whereabouts of the copy used by Rhoads for the facsimile remains a mystery. We know that it was bound with a copy of *Arbustum Americanum*.

or three feet, generally ſeveral from one root, with ſmall, alternate, divaricated branches. The leaves are oval, ſomewhat toothed towards the apex, and placed alternate. The flowers are produced in ſpikes terminating the ſtalks; they are ſeſſile, and each furniſhed with a bractea or floral leaf, which is ovate, rough externally, longer than the empalement and ſitting cloſe at their baſe; they are produced early in the ſpring and being thick ſet, make a beautiful appearance with their long, ſnowy white ſtamina. The fruit or ſeed-veſſel very much reſembles that of the Hamamalis or Witch Hazel, but is much ſmaller.

This, in ſome late Catalogues, has been called *Youngſonia*, in honour of William Young, Botaniſt, of Pennſylvania; but by Dr. Linnæus, *Fothergilla* in honour of the late Dr. Fothergill of London. It was firſt ſent to Europe, from Carolina, by John Bartram, to his friend P. Collinſon, by the title of Gardenia.

FRANKLINIA.

FRANKLINIA.

Claſs 16. Order 5. Monadelphia Polyandria.

THE *Empalement* is of one leaf, five-cleft; the diviſions roundiſh.

The *Corolla* conſiſts of five petals, large, ſpreading, roundiſh, narrowed towards the claw, and joined at the baſe.

The *Filaments* are numerous, awl-ſhaped, joined beneath in a cylinder, and inſerted in the corolla. The *Antheræ* are twin.

The *Germen* is roundiſh, lightly furrowed. The *Style* cylindrical and longer than the ſtamina. The *Stigma* obtuſe and rayed.

The *Seed-veſſel*, a roundiſh nut with five cells.

The *Seeds* are wedge-form, and ſeveral in each cell.

The Species *one*, viz.

Franklinia alatamaha. *Franklinia.*

(Bartram's Catalogue.)

This beautiful flowering, tree-like ſhrub, riſes with an erect trunk to the height of about twenty feet; dividing into branches, alternately diſpoſed. The leaves are oblong, narrowed towards the baſe, ſawed on their edges, placed alternately, and ſitting cloſe to the branches. The flowers are produced towards the extremity of the branches, ſitting cloſe at the boſom of the leaves; they are often five inches in diameter when fully expanded; compoſed of five large, roundiſh, ſpreading petals, ornamented in the center with a tuft or crown of gold coloured ſtamina; and poſſeſſed with the fragrance of a China Orange. This newly diſcovered, rare, and elegant flowering ſhrub, was firſt obſerved by John Bartram when on botanical reſearches, on the Alatamaha river in Georgia, Anno 1760; but was not brought into Pennſylvania till about fifteen years after, when his ſon William Bartram, employed in the like purſuits, reviſited the place where it had been before obſerved, and had the pleaſing proſpect of beholding it in its native ſoil, poſſeſſed with all its floral charms; and bearing ripe ſeeds at the ſame time; ſome of which he collected and brought home, and raiſed ſeveral plants therefrom, which in four years time flowered, and in one year after perfected ripe ſeeds.

It ſeems nearly allied to the Gordonia, to which it has, in ſome late Catalogues, been joined: but William Bartram, who firſt introduced it, believing it to be a new Genus, has choſen to honour it with the name of that patron of ſciences, and truly great

and diſtinguiſhed character, Dr. Benjamin Franklin. The trivial name is added from the river, where alone it has been obſerved to grow naturally. It delights in a looſe, ſandy and moiſt ſoil.

FRAXINUS.

The ASH-TREE.

Claſs 23. Order 2. Polygamia Dioecia.

THE Flowers are *Hermaphrodite* and *Female* on different trees.

* The *Hermaphrodite:*

The *Calyx* none; or an *Empalement* of one leaf, four-parted, erect, acute, and ſmall.

The *Corolla* none; or of four petals, linear, long, acute, and erect.

The *Filaments* are two, erect and ſhorter than the corolla. The *Antheræ* are erect, oblong, and four furrowed.

The *Germen* is ovate and compreſſed. The *Style* cylindrical and erect. The *Stigma* thickiſh and two cleft.

The *Seed-veſſel* none beſides the cruſt of the ſeed.

The *Seed* is lanced, compreſſed-membranaceous and of one cell.

* The *Female* are the ſame in every part except wanting the ſtamina.

The Species *are*,

1. Fraxinus americana. *Carolinian or Red Aſh.*

This grows to the height of twenty or thirty feet, dividing into ſeveral branches, the ſmall ones of which are generally oppoſite; the leaves are compoſed of three or four pair of lobes, terminated by an odd one, which are egg-ſhaped and pointed, their upper ſurface of a light green colour, their under covered with ſhort white downy hairs. The ſeeds are broad and of a light colour.

6 *Arbustum Americanum*

HUMPHRY MARSHALL, PHILADELPHIA, 1785.

Arbustum Americanum (*The American Grove*) is the first book on native trees and shrubs published in America—on American paper, with American ink, and with an American typographical error in the title. That the *Arbustum Americanum* was arranged alphabetically (perhaps for the convenience of gardeners) although it purported to follow the Linnaean system, or that *Fagus* and *Quercus* stand together in today's plant manuals, does not diminish this highly readable text. It resembles a high-class catalogue designed to inform the potential planter of what can be expected from each tree and shrub that grows in the "American Grove."

Humphry Marshall was John Bartram's first cousin. Like Bartram he grew up on a farm in Chester County and was self-educated. Like Bartram he started a botanical garden, in 1773, and as Bartram had sent seeds and plants to Collinson, so Marshall later shipped them to Europeans, especially William Bartram's patron, Quaker physician John Fothergill.

Dr. Thomas Bond, a Maryland physician who moved to Philadelphia and had studied botany in France with Jussieu over forty years before, undoubtedly guided Marshall to interested French arboriculturists and to the king, who was "extremely pleased" with a collection Marshall sent him. But it was Samuel Vaughan, a wealthy Jamaica planter who settled in Philadelphia in 1782 because of friendship with Franklin, who sponsored Marshall's book. Vaughan paid Joseph Crukshank, a prominent Philadelphia printer and publisher, £70 2s. and 6d. for printing one thousand copies.[9] The *Arbustum* was ahead of its time in America and sold better in England. In Paris it was translated by Lézermes, assistant arborist to King Louis XVI, and published with additional notes and cultural observations in 1788. A German edition appeared in the same year.

The first printed account of *Franklinia* appeared in *Arbustum Americanum*.

For Wm Bartram — from Robt Barclay 1790

A present For
Collr. Robert Carr
from his affectionat friend
and relative
Willm Bartram
1819

HORTUS KEWENSIS;

OR, A

CATALOGUE

OF THE

PLANTS

CULTIVATED IN THE

ROYAL BOTANIC GARDEN AT KEW.

BY WILLIAM AITON,
GARDENER TO
HIS MAJESTY.

IN THREE VOLUMES.

VOL. I.

MONANDRIA — HEPTANDRIA.

LONDON:
PRINTED FOR GEORGE NICOL, BOOKSELLER
TO HIS MAJESTY, PALL MALL.
M.DCC.LXXXIX.

7 *Hortus Kewensis*

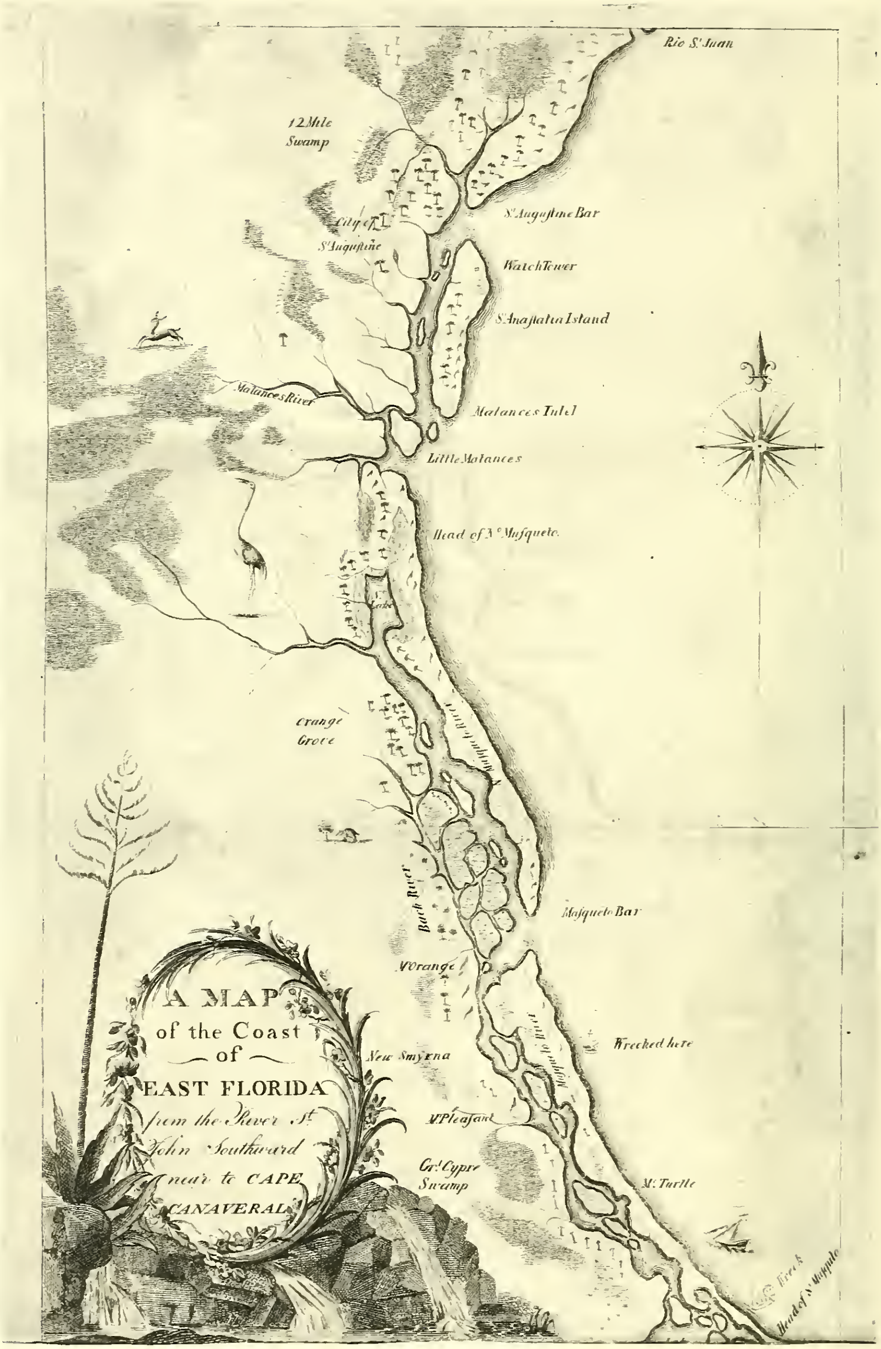
WILLIAM AITON, LONDON, 1789.

English authors were not without influence on American horticulture. John Bartram, working to collect, grow, and identify plants of the American wilderness, owned a number of books from abroad and always sought more. This copy of *Hortus Kewensis* was a present to his son William Bartram from an English Quaker, Robert Barclay, evidence of the close relationship between the two men. It was for Barclay that William drew the magnificent *Franklinia alatamaha* at the height of his artistic career. Bartram also sent Barclay dried specimens of thirty-eight plants collected on his southeastern trip in 1786. These are preserved in the British Museum (Natural History).

William Aiton was an apprentice gardener under Philip Miller, gardener at the Chelsea Physick Garden and author of *The Gardener's Dictionary*, a most important and far-reaching work. Aiton must have learned well because in 1759, when it was formally established, he was appointed superintendent of the Royal Botanic Gardens at Kew. He corresponded with John Bartram, Jr., and they exchanged packets of seeds.

Hortus Kewensis was the first official catalogue of the Kew Gardens's collection and is valuable for its record of the introductory dates of plants into horticulture. It seems, however, that Aiton was a better plantsman than writer; Daniel Solander, an excellent botanist, and Jonas Dryander, the devoted librarian, who worked for Sir Joseph Banks, are known to have prepared the text. The work was successful and George III ordered one hundred copies for his friends.

Hortus Kewensis was first published in 1783.


A MAP
of the Coast
of
EAST FLORIDA
from the River St.
John Southward
near to CAPE
CANAVERAL
Rio St. Juan
12 Mile
Swamp
City of
St. Auguſtine
St. Auguſtine Bar
Watch Tower
St. Anaſtatia Island
Matances River
Matances Inlet
Little Matances
Head of No. Muſqueto
Lake
Orange
Grove
Muſqueto River
Back River
Maſqueto Bar
Mt. Orange
New Smyrna
Muſqueto River
Wrecked here
Mt. Pleaſant
Grt. Cypre
Swamp
Mt. Turtle
Creek
Head of St. Muſquito

8 *Travels through North and South Carolina, &c.*

WILLIAM BARTRAM, PHILADELPHIA, 1791.

William Bartram, the fifth of John Bartram's sons, began drawing birds as a boy "when he could find a little time from school where he learns Lattin."[10] When Billy was about fifteen, his father sent some of his drawings to Peter Collinson in London. This early work showed unusual ability and eventually won the patronage of Dr. John Fothergill during William's years of exploring.

William unsuccessfully tried several modes of employment, from merchant to indigo planter, but his talents lay in observing nature and describing and drawing what he saw. He accompanied his father on extensive plant-hunting trips and later journeyed alone through the wilderness. He reached the Gulf of Mexico and saw the Mississippi River, always carefully observing Indians and their ways, birds, fish, terrifying alligators, curious rock and land formations, and the new plants he discovered.

As John Bartram had sent field journals to Collinson, William sent his to Fothergill; two manuscript volumes of reports survive. *Travels* was published after fourteen years of painful delays, when Bartram was fifty-two. Henry Muhlenberg wrote that it "displays an extraordinary amount of noteworthy material"[11] expressed, in Emerson's words, with a "Biblical grandeur." The book was also printed in London and Dublin; translations in Berlin, Haarlem, and Paris followed.

Bartram's *Travels* mentions plants at times in a casual way as if fuller descriptions were being planned. It is practically certain he did not have an opportunity to read proof for the *Travels*, which probably accounts for its curiously inconsistent spellings. It is unfortunate that the book did not appear sooner, so Bartram could have been more fully recognized for his discoveries of many new plants.

Poems of Coleridge and Wordsworth were inspired by the imagery used by Bartram in the *Travels*.

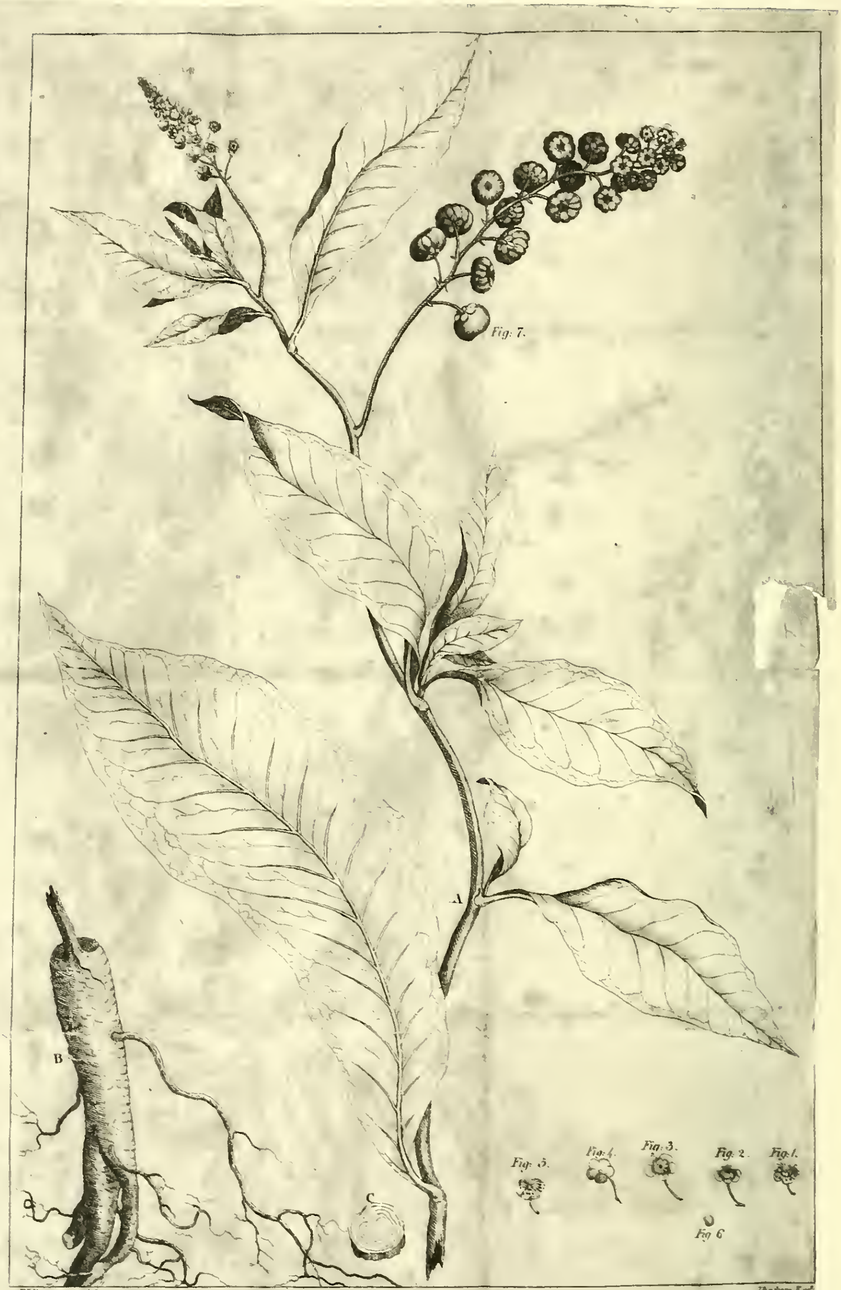


Fig: 7.
A
B
C
Fig: 5.
Fig: 4.
Fig: 3.
Fig: 2.
Fig: 1.
Fig 6

W. Bartram del.

J. Thackara Sc.

Phytolacca decandra Linn:

9 *An Inaugural Botanico-Medical Dissertation on the* Phytolacca decandra *of Linnaeus*

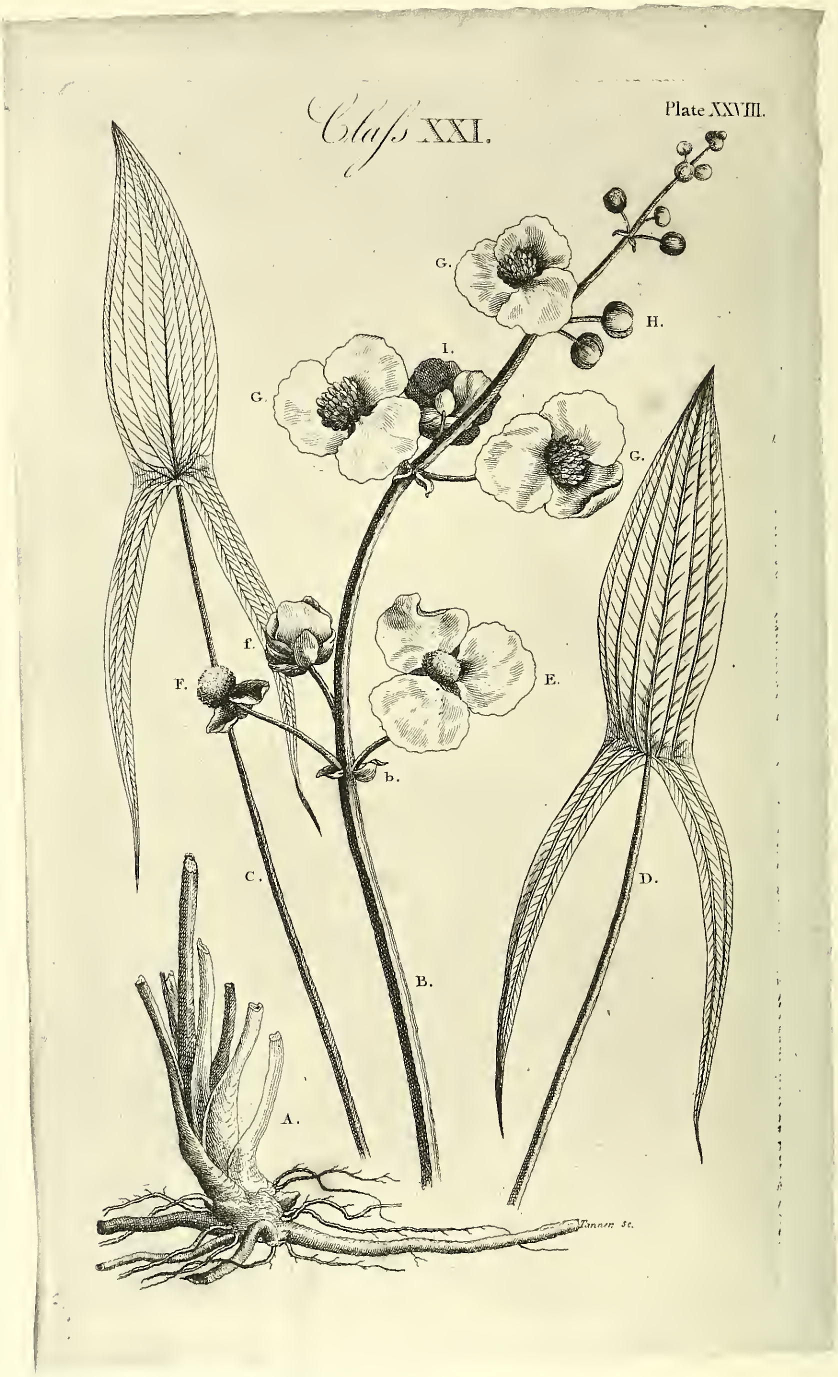
BENJAMIN SHULTZ, PHILADELPHIA, 1795.

Benjamin Shultz, eldest of a Montgomery County schoolteacher's seven children, attended the University of Pennsylvania where his medical studies were guided by Doctors Caspar Wistar, the anatomist commemorated in the name wisteria, and Benjamin Smith Barton, Professor of Natural History and Botany. Botany and medicine were then practically one, as doctors derived most of their remedies from plants.

Searching for unrecognized properties in American plants to add to the traditional materia medica, Shultz pondered in his doctoral dissertation, "With what enthusiasm and at how much expense, do we send many thousand miles for exotic plants, whose virtues may, perhaps, be far inferior to many of our own. . . ." He prepared extracts, tinctures, and ointments from the roots, leaves, and berries of the ubiquitous pokeweed, *Phytolacca decandra*, testing them on dogs and compiling anecdotes about their effects "on the living body." He found that in spite of poisonous qualities pokeweed could cure ulcers, had value as an emetic and cathartic, and as a narcotic had advantages not possessed by opium.

After receiving his medical degree, Shultz practiced in Hereford Township in Berks County and planted an experimental garden to carry on his testing of native plants. His practice suffered from his frequent trips to Philadelphia for equipment; during one absence a fight among his hired hands resulted in most of his plants being trampled. He borrowed $10,000 from seventy creditors and sold his experimental garden in an effort to make ends meet. Unable to pay off these loans, Shultz was jailed. He was later released to the hard life of an ex-debtor.[12]

William Bartram illustrated the works of many of his contemporaries, such as Shultz's *Dissertation*.



Arrowhead (*Sagittaria sagittifolia*)

10 *Elements of Botany*

BENJAMIN SMITH BARTON, PHILADELPHIA, 1803.

Benjamin Smith Barton spent his boyhood on Conestoga Creek near Carlisle where his father, an Anglican priest, ministered to the Indians. He began his medical apprenticeship at eighteen. The next year he surveyed Pennsylvania's western boundary with his uncle, David Rittenhouse. Barton spent two years at medical school in Edinburgh and visited with English naturalists. In 1789, he became Professor of Natural History and Botany at the University of Pennsylvania and, six years later, of Materia Medica.

The *Elements of Botany* was the first botany textbook published in this country. Six editions appeared from 1803 to 1836; Barton contributed pioneer essays and commentaries in the fields of zoology, ethnography, and drug plants.

Barton was a close associate of William Bartram, many of whose drawings were used in his publications. Barton not only grew plants in his own small greenhouse, but he took his classes to Bartram's garden and Landreth's nursery. Both Frederick Pursh and Thomas Nuttall were, for short periods, in his employ in the preparation of a projected flora of North America.

An antiquarian at heart, Barton poured over his beloved books—he owned the largest private natural history library in this country. Many of his books had belonged to the naturalist John Banister of Virginia who died in 1692. Barton used his books for the copious footnotes in his own numerous publications.

Beginning in 1797, he brought together what was then the largest herbarium of native plants. Among his long roster of students were William Darlington and Meriwether Lewis; among his few close friends, Thomas Jefferson, whom he greatly admired, and the English naturalist Thomas Pennant.

Barton, orphaned at fourteen, endured persistent ill-health, yet he lived a busy life teaching medical students and maintaining a doctor's practice. He was curator and a vice-president of the American Philosophical Society, writing and editing, corresponding with scientists and literati around the world, all in the short span of forty-nine years.

Most of the plants in *Elements of Botany* were engraved from original drawings made by William Bartram.

AN

EPITOME

OF

MR. FORSYTH'S TREATISE

ON THE

CULTURE AND MANAGEMENT

OF

FRUIT-TREES.

ALSO,

NOTES ON AMERICAN GARDENING AND FRUITS:
WITH DESIGNS FOR PROMOTING THE RIPENING OF FRUITS, AND SECURING THEM
AS FAMILY COMFORTS:

AND FURTHER,

OF ECONOMICAL PRINCIPLES IN BUILDING
FARMERS' HABITATIONS.

BY AN AMERICAN FARMER.

PHILADELPHIA:
PRINTED BY T. L. PLOWMAN,
FOR JOHN MORGAN, NO. 26, SOUTH THIRD-STREET.
....
1803.

11 *An Epitome of Mr. Forsyth's Treatise on the Culture and Management of Fruit Trees*

BY AN AMERICAN FARMER, PHILADELPHIA, 1803.

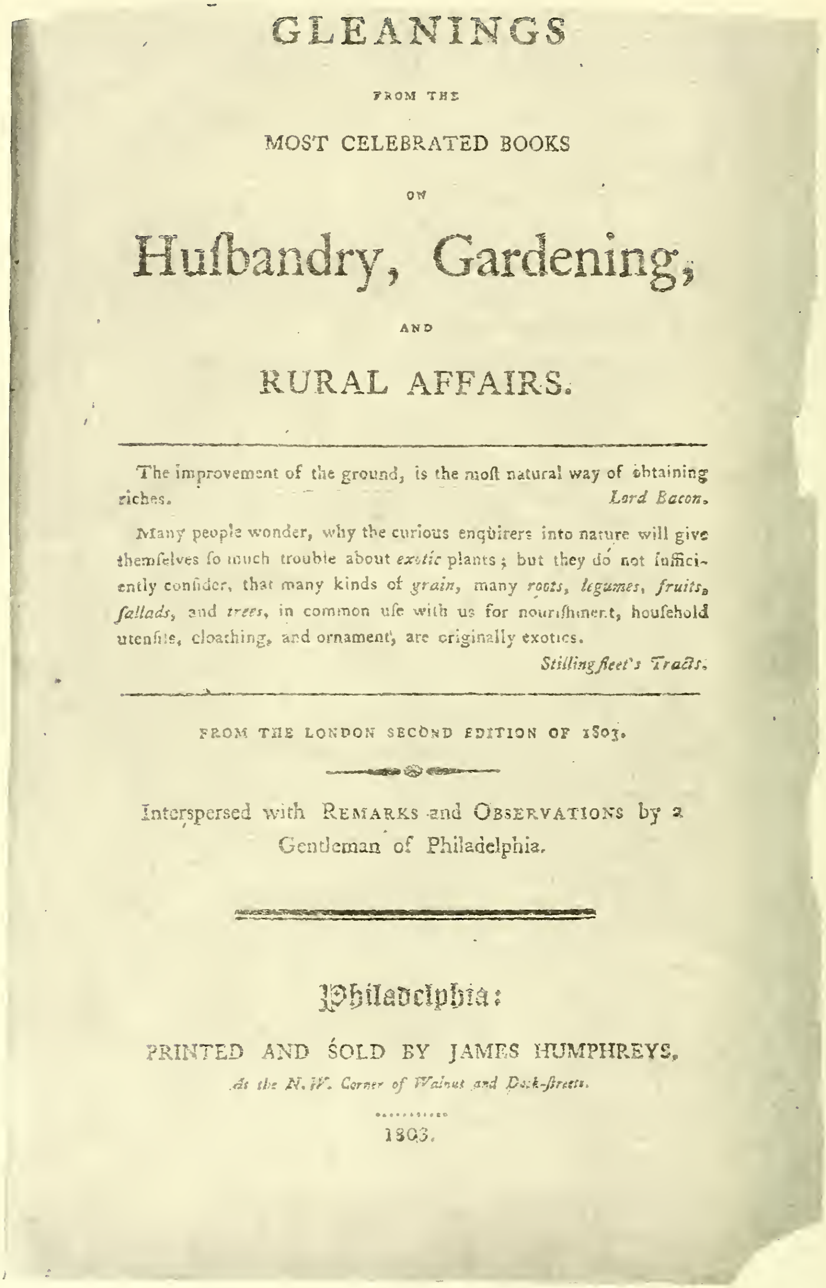
William Forsyth, a Scot and gardener to the king at Kensington, was the author of *Observations on diseases, defects and injuries of fruit and forest trees with an account of a particular method of cure*, published in London in 1791. With a new title and forest trees omitted, as well as many changes made to meet American growing conditions, it was published in New York in 1802 and in Philadelphia the following year. The identity of the editor, who called himself "an American farmer," is not known.

It is interesting to note the difference in appearance between the original and American editions. The British edition is a large, handsome volume printed on fine paper with large fold-out illustrations. While the American edition, at some considerable cost according to its editor, kept the illustrations, they are much reduced in size, as is the entire work.

The *Epitome* bears much evidence of its revision for American readers. Such topics as the favorable climate of the Middle Atlantic states for fruit-growing, the neglect of desirable varieties of apples, the merit of cherry brandy, the need to plant quinces apart from apples and pears, the suggestion that cider be produced, advice on nut-growing, and the neglect of orchards in general were all covered.

The American edition includes the remedy for tree wounds for which Forsyth was well known and well paid. "Forsyth's Plasters," a concoction of lime, rubber, ashes, soapsuds, urine, and cow dung, purported to heal wounds in trees. In the end it was discredited. It is sad that this hoax overshadowed Forsyth's place in horticulture for he was a good gardener, trained at the Chelsea Physick Garden under Philip Miller, and an able writer. Forsyth was one of the seven founders of the Horticultural Society of London, forerunner of the Royal Horticultural Society. The Chinese shrub forsythia, introduced into England in 1850, was named in his honor.

An Epitome was the most widely read book on fruit during the first decades of the nineteenth century.



GLEANINGS

FROM THE

MOST CELEBRATED BOOKS

ON

Huſbandry, Gardening,

AND

RURAL AFFAIRS.

The improvement of the ground, is the moſt natural way of obtaining riches. *Lord Bacon.*

Many people wonder, why the curious enquirers into nature will give themſelves ſo much trouble about *exotic* plants; but they do not ſufficiently conſider, that many kinds of *grain*, many *roots*, *legumes*, *fruits*, *ſallads*, and *trees*, in common uſe with us for nouriſhment, houſehold utenſils, cloathing, and ornament, are originally exotics.

Stillingfleet's Tracts.

FROM THE LONDON SECOND EDITION OF 1803.

Interſperſed with REMARKS and OBSERVATIONS by a
Gentleman of Philadelphia.

Philadelphia:
PRINTED AND SOLD BY JAMES HUMPHREYS,
At the N. W. Corner of Walnut and Dock-ſtreets.
1803.

12 *Gleanings from the Most Celebrated Books on Husbandry, Gardening, and Rural Affairs*

ANONYMOUS, PHILADELPHIA, 1803.

Anonymous writings always excite our detective instincts. The identity of the "American farmer" who prepared the American edition of the *Epitome of Forsyth's Treatise on the Culture and Management of Fruit Trees* from the London edition is hidden, as is the authorship of this Philadelphia edition of *Gleanings*. The *Gentleman's Magazine* of 1801 noted that the London edition had been "drawn up at the desire of the Board of Agriculture."[13]

Numerous clues suggest that Benjamin Smith Barton could be the unknown editor of *Gleanings*, as well as the "American farmer" of the *Epitome*. "Remarks and observations by a gentleman of Philadelphia" are interspersed throughout. Remedies shown reliable "by recent experience" hint at Barton's role as medical commentator. Reference is made to the American Philosophical Society—Barton was vice-president—and its publication of the "best account" of making red currant wine. There is considerable use of vicarious documentation, a particular predilection of Professor Barton's.

Another Philadelphian, Dr. James Mease, is a possible editor since his medical background was overlaid with an extensive familiarity with agricultural practices.

It is unlikely that we shall ever know positively who put together the interesting notes on warted gourds, guinea grass, "poison ash"; on "rum, an intemporate liquor" versus "small beer, the best family drink"; the incidental intelligence that the smell of goats affects horses; and that wild figs grow near Cape Henry on the Chesapeake Bay.

Gleanings is an excellent example of the way horticulture was presented with a wide mixture of agriculture, natural history, and smatterings of information on a variety of subjects. The American edition must have been popular, since at least two dozen copies are to be found in American libraries today.

The publisher of *Gleanings*, James Humphreys, also advertised *An Epitome of Mr. Forsyth's Treatise*, along with several other anonymous publications.

,, *thyrsiflora*	Simple-stalked Walchendorfia
Watsonia brevifolia	Short-leaved Watsonia
,, *plantaginea*	Small-flowered do.
,, *marginata*	Long-spiked do.
,, *iridifolia*, v. fulgens	Scarlet Flag-leaved do.
,, *humilis*	Lake-coloured do.
,, *aletroides*	Aletris-like do.
,, *rosea-abla*	Long-tubed do.

HOT-HOUSE TREES, SHRUBS, AND SUCCULENT PLANTS.

Where there is not the convenience of a Hot-House, those marked thus *, as well as several other kinds, may be preserved in a good Green-House.

Abroma augusta	Maple-leaved Abroma
Abrus precatorius	Jamaica Wild Liquorice
Acalypha villosa	Villous Acalypha
Achania Malvaviscus	Scarlet Achania
,, *pilosa*	Hairy do.
Achras mammosa	Mammee Sapota
,, *Sapota*	Common Sapota
Adansania digitata	Ethiopian Sour-gourd
Adelia Bernardia	Villous-leaved Adelia
,, *Acidoton*	Box-leaved do.
Adenanthera pavonina	Peacock Adenanthera
Ægopricon betulinum	Birch-leaved Ægopricon
Æschynomene grandiflora	Great-flowered Æschynomene
,, *coccinea*	Scarlet-flowered do.
,, *Sesban*	Egyptian do.
Agathophyllum aromaticum	Aromatic Agathophyllum
Agave fætida	Fetid Agave
,, *lurida*	Broad-leaved Vera Cruz do.
,, *tuberosa*	Tuberous-rooted do.
,, *vivipara*	Viviparous do.
Aleurites triloba	Three-lobed Aleurites
Allamanda cathartica	Willow-leaved Allamanda
Alstonia theæformis	Tea-leaved Alstonia
Amyris gileadensis	Balm of Gillead Tree
Anacardium occidentale	Cashew Nut
Andrachne arbarea	Tree Andrachne
,, *fruticosa*	Shrubby do.
Annona muricata	Rough Custard Apple, or Sour Sop
,, *squamosa*	Undulated do. or Sweet Sop
,, *reticulata*	Netted Custard Apple
,, *tripetala*	Cherimola (of Miller)
Antidesma alexiteria	Lemon-leaved Antidesma
Aquilaria ovata	Wood Aloe
Arachis fruticosa	Shrubby Earth or Ground Nut
Areca oleracea	Cabbage Tree
,, *Catechu*	Betel Nut
Argythamnia candicans	Sweet-scented Argythamnia
Aristolochia odoratissima	Sweet-scented Birthwort
Artecarpus incisa	Bread-fruit Tree

13 *American Gardener's Calendar*

BERNARD M'MAHON, PHILADELPHIA, 1806.

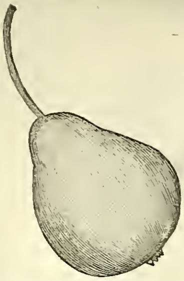
Bernard M'Mahon, an intelligent, educated Irishman, immigrated to America in 1796 for political reasons. He settled in Philadelphia and established a seed store in the city on Second Street near Market. Here he carried on considerable trade and also collected and exported American seeds. His wife, Ann, was an active partner in the business.

M'Mahon was a friend of Thomas Jefferson and it seems that the Lewis and Clark Expedition was planned in the store. Many of the seeds brought home by Meriwether Lewis were turned over to M'Mahon who grew them in his greenhouse at Upsala, in Germantown. M'Mahon's greatest service to horticulture was writing the *American Gardener's Calendar*, the first practical gardening book published in this country. The *American Gardener's Calendar* is a long book covering many topics. There are lists of available plants then in cultivation, sections on herbs, wildflowers, aquatic plants, fruit trees, annual and perennial plants, medicinal plants and vegetables. Nearly four thousand species of plants are listed. The *Calendar* had much influence on early horticulture and for over fifty years was the best authority on gardening in America.

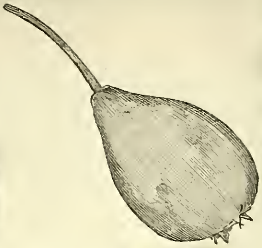
The M'Mahons' knowledge and generous personalities made their store a gathering place for botanists and gardeners. The preface of the eleventh edition of M'Mahon's *American Gardener's Calendar*, 1857, edited by John Jay Smith, a writer on horticultural subjects, describes their store:

". . . its bulk window, ornamented with tulip glasses, a large pumpkin, and a basket or two of bulbous roots; behind the counter officiated Mrs. M'Mahon, with some considerable Irish accent . . . in one corner was a shelf containing a few botanical or gardening books, for which there was then a very small demand; another contained the few garden implements, such as knives and trimming scissors; a barrel of peas, a bag of seedling potatoes, an onion receptacle, a few chairs, and the room partly lined with drawers containing seeds, constituted the apparent stock in trade of what was one of the greatest seed stores then known in the Union. . . ."

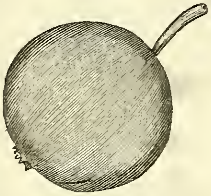
It is unfortunate that many of the plants M'Mahon listed are not in cultivation today.



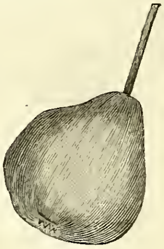
No. 6. Bellissime d'Ete', or Supreme.



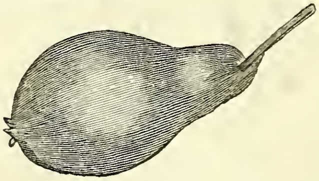
No. 7. Poire sans Peau, or Skinless.



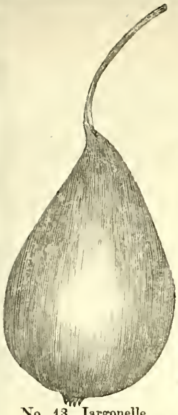
No. 8. Fine Gold of Summer.



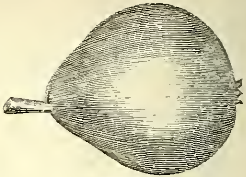
No. 9. Aurate.



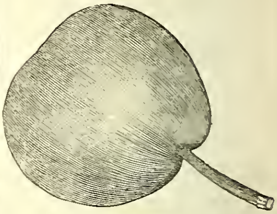
No. 10. Epargue.



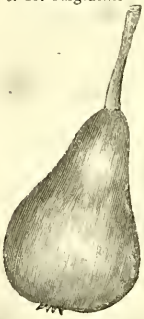
No. 13. Jargonelle.



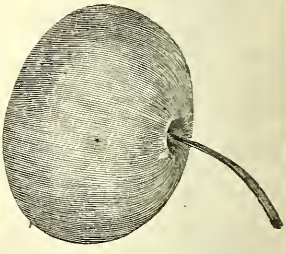
No. 12. Julienne.



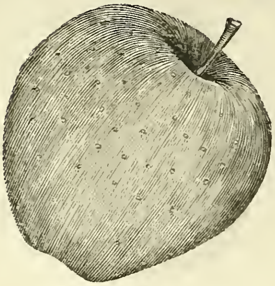
No. 14. Orange Musquee.



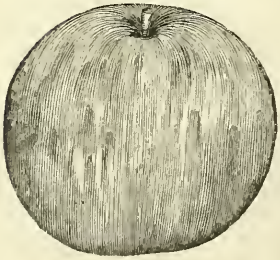
No. 11. Cuisse Madame.



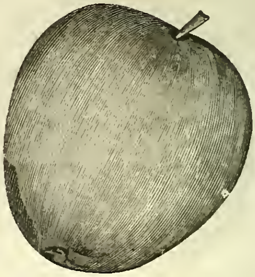
No. 15. Red Bergamot.



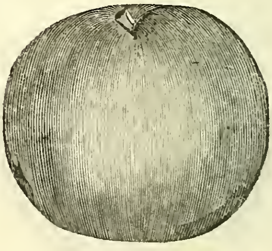
No. 51. Scriveners Red,



No. 52. Cider Apple.



No. 53. Cann Apple.



No. 54. Roman Stem.

14 *A View on the Cultivation of Fruit Trees*

WILLIAM COXE, PHILADELPHIA, 1817.

"Notwithstanding the acknowledged fitness of our climate for the production of Apples and Cider of the most exquisite flavour, we are yet without any detailed system of practical management by a writer of our own Country. . . . Having for many years actively engaged in the rearing, planting and cultivating fruit trees, on a scale more extensive than has been attempted by any other individual of this country, I have too often had occasion to regret the difficulty, and not unfrequently the impossibility of obtaining from my own countrymen, information on which I could rely respecting the objects of my pursuit . . . ," wrote William Coxe. He remedied the lack in 1817 when his book was published. Written carefully and with the authority of experience, it treats each aspect of fruit-growing as an entity and clearly describes the many fruit varieties. Cider's importance is obvious, "unquestionably the most difficult branch of the business of an Orchardist; and that on which the success of his plans must chiefly depend."

Born in Philadelphia, Coxe became a literary, social, and scientific figure in the city as well as a prosperous merchant. He grew all the varieties of fruits obtainable in America plus many imported ones at his home in Burlington, New Jersey, where David Smith's nursery—one of the largest in the region devoted to fruit trees—was situated. In Smith's catalogue of 1806, 151 varieties of apples, 98 of pears, 67 of peaches, 43 of cherries, 20 of plums, 16 of nectarines, and 10 varieties of apricots were listed.

As a member of the New Jersey legislature, Coxe fostered fruit-growing; later, as a member of Congress, he found Daniel Webster a kindred spirit. Coxe was elected the first honorary member of the Pennsylvania Horticultural Society in November, 1828, and was also a member of the Horticultural Society of London.

The illustrations in Coxe's book are quaint but show thoughtful care.

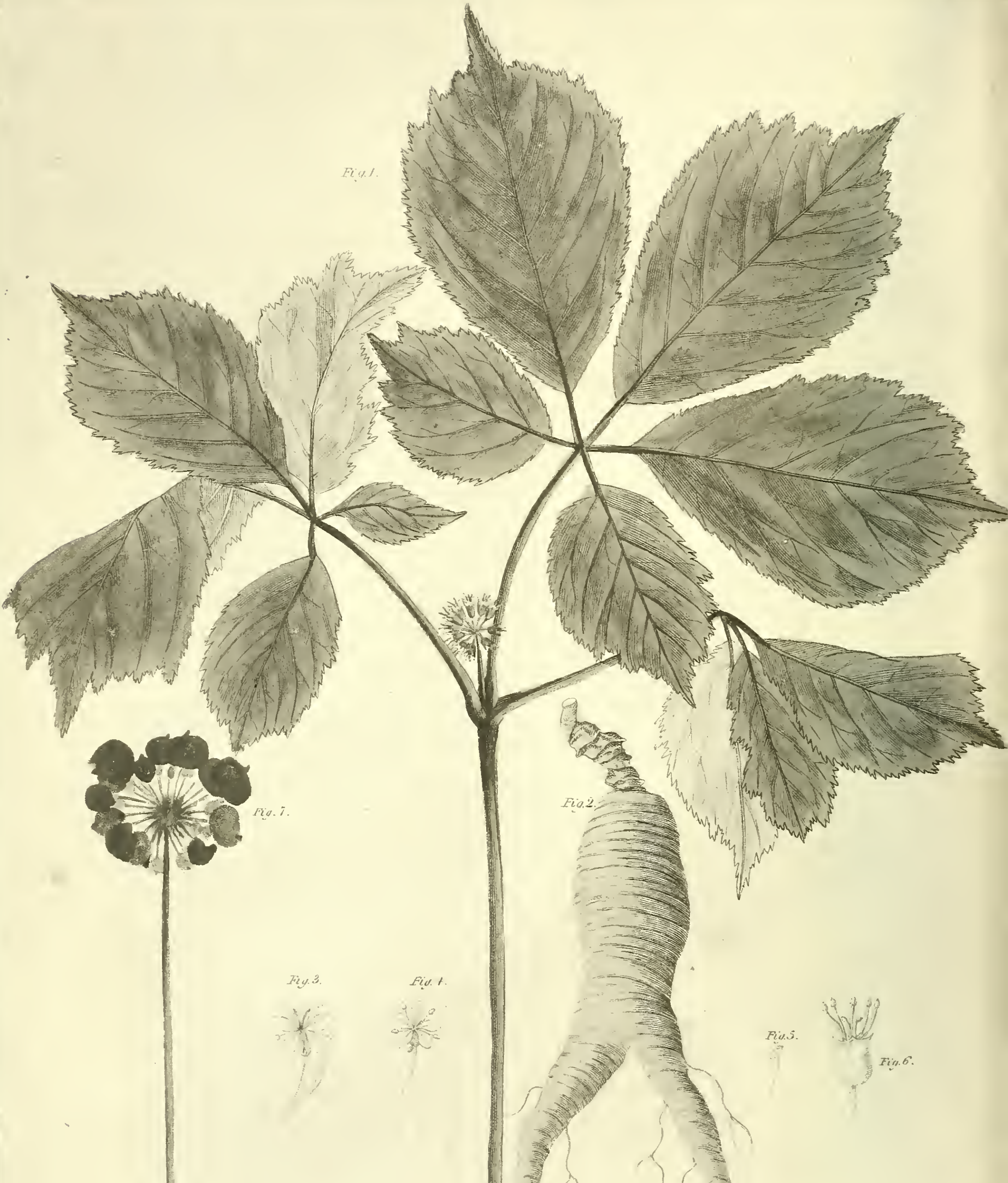


Fig. 1.
Fig. 7.
Fig. 2.
Fig. 3.
Fig. 4.
Fig. 5.
Fig. 6.

15 *Vegetable Materia Medica of the United States*

WILLIAM PAUL CRILLON BARTON, PHILADELPHIA, 1817–18.

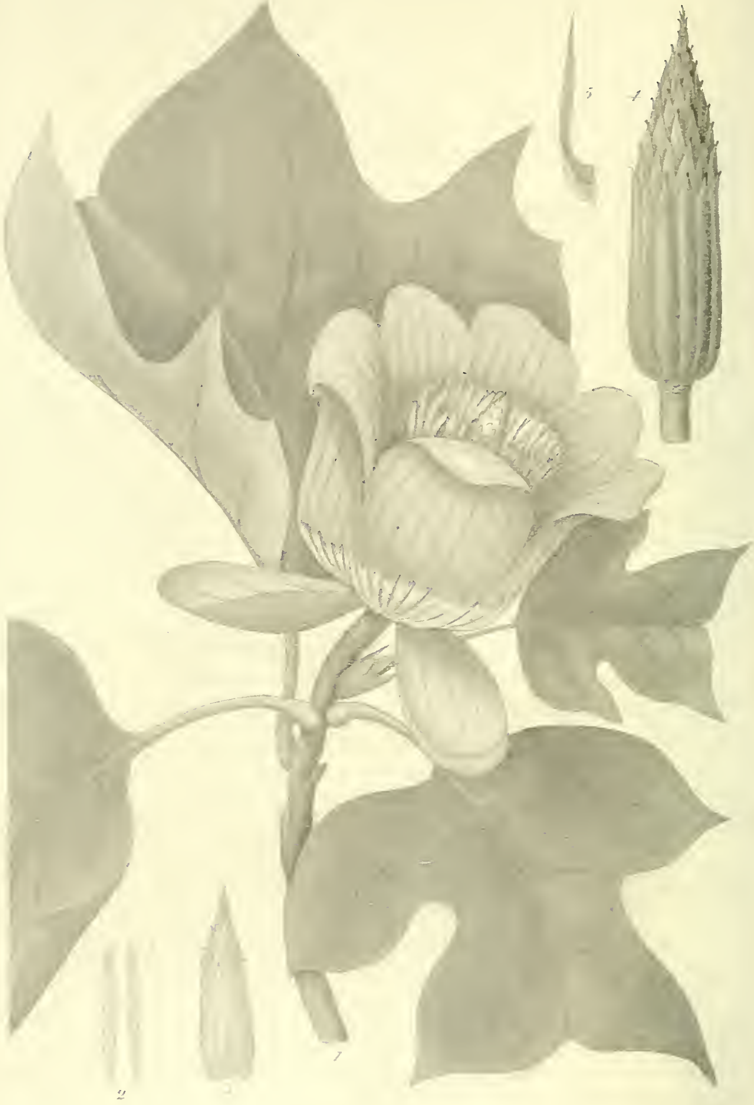
William P. C. Barton took his degree in medicine under his famous uncle, Benjamin Smith Barton, in 1808 from the University of Pennsylvania. Barton practiced surgery at the Pennsylvania Hospital; then served in the Navy with distinction. He later became Professor of Botany at the University of Pennsylvania and taught at Jefferson Medical School. "Notwithstanding his oddities, I was fond of W. P. C. Barton." Such was the estimate of his pupil Dr. Samuel Gross of the Jefferson Medical College. Gross found him "always facetious, and generally interesting." "He generally appeared before his class with two vests of different colors, which he never wore on two consecutive days, notwithstanding his poverty."

The *Vegetable Materia Medica*, in two volumes, was Barton's first long work. He drew the plants from life, then colored the plates himself, sometimes enlisting the help of his wife. Each of the forty-nine plants illustrated is followed by its botanical name, reference details, description, and finally a full discussion of its medicinal properties. In some cases, the economic uses are listed in addition to the methods of preparation. The plants described were all indigenous to America. Barton hoped his work would encourage communication between "practitioners of medicine residing in different parts of the United States. . . ."

Dr. Caleb Cushing wrote in his essay in the *North American Review* in 1821, that although the *Materia Medica* "manifests considerable industry in the compilation of facts and statements from various books . . . the misfortune is, that in the parts relating to medicine, it is almost entirely a compilation. . . . Dr. Barton appears rarely to have performed any experiments upon the chemical organization of the plants he describes, and seldom to have ascertained the reputed effects on the human system by personal investigation." On the other hand Donald Culross Peattie considered Barton's work "an excellent account of our medicinal plants."

Ginseng (*Panax quinquefolium*). The roots were of value for their medicinal properties.

PL. XXXVI



Liriodendron tulipifera

16 *American Medical Botany*

JACOB BIGELOW, BOSTON, 1817–20.

Until about 1835 Philadelphia was the center of botanical and, therefore, of medical learning. As a student in medicine at the University of Pennsylvania, Bostonian Jacob Bigelow was importantly influenced by Professor Benjamin Smith Barton's enthusiasm for materia medica. Dr. Bigelow wrote, "above all the thing we sorely lack in this land of Milk and molasses is good Botanical books and plates. . . . Upon the faith of a Mussulman I think a man might signalize himself without difficulty among the New Englanders who are as ignorant of botany as a nation of Jack-asses."[14] Even so, Bigelow found suitable companions for climbing Mt. Washington where he made a list of Alpine plants encountered and the first good estimate of the mountain's height. He is commemorated there by a fell field named "Bigelow's Lawn."

As Rumford Professor and Lecturer in Materia Medica and Botany at Harvard, Bigelow fulfilled another need when his *American Medical Botany* was published. This three-volume work, ". . . undertaken with a desire to promote the knowledge of those indigenous plants, which possess medicinal properties, and which are, or may be applied to useful purposes" and illustrated with sixty plates, appeared originally in six demi-volumes. They are among the earliest color-plate books, done by a special process of the author's own invention from drawings made principally by himself. Caleb Cushing wrote that Bigelow "not only described the botanical properties of his plants with great accuracy, which is more than can be said of his predecessors, but has also done it with perspicuity and elegance of expression."[15]

Bigelow's interest in helping establish the innovative naturalistically landscaped Mount Auburn Cemetery in Boston was soon reflected in Philadelphia's Laurel Hill Cemetery.

A colleague in Philadelphia described Bigelow as "naturally of a jovial temperament, gentle, and light-hearted, he was a delightful companion."[16]

A distillate made from the bark of the Tulip-Tree (*Liriodendron tulipifera*) was used to treat chronic rheumatism.

parted?—Was it not of more importance to have given a figure of this very interesting plant than of *Monarda Kalmiana*, or *Lupinus villosus?*

ORDER II.—DI-PENTAGYNIA. (*2 to 5 styles.*)

371. DELPHINIUM. *L.* (Larkspur.)

Calix none. *Petals* 5. *Lepanthium* (nectary) bifid, cornutely produced behind. *Siliques* 3 or 1.

Herbaceous, lower leaves digitate or palmate, upper ones often undivided; flowers closely spiked or paniculate, blue, violaceous or yellowish.

SPECIES. 1. D. *tricorne*. 2. *azureum*. 3. *exaltatum*. 4. *consolida*. Naturalized. 5. * *virescens*. Perennial, pubescent; lepanthium 4-leaved, shorter than the 5 calicine petals, interior laminæ densely bearded; leaves 3-parted, segments linear, subtrifid, lower ones divaricate. HAB. On the plains of the Missouri. OBS. Stem simple about 8 to 12 inches, pubescent; leaves upon long petioles, partly digitate or 5-parted, 10 to 15 lines wide; spike few-flowered, flowers greenish white, petaloid calix, 5-leaved, leaves oblong, spur longer than the flower, nearly straight. Petals of the lepanthium 4; the 2 internal ones irregularly concave, small, the 2 lateral larger, flat, and unguiculate, bearded, claw sending out a short spur at the base; capsules 3. Flowering in June.

A genus almost equally divided betwixt Siberia and the south of Europe.

372. ACONITUM. *L.* (Wolf's-bane.)

Calix none. *Petals* 5, the uppermost one arched. *Lepanthia* 2, pedunculate, recurved. *Siliques* 3 or 5.

Leaves digitate or palmate; flowers paniculate or loosely spiked, terminal, violaceous or yellowish.

SPECIES. 1. A. *uncinatum*. Probably poisonous in common with many other species of this genus. The flowers considerably resemble those of the common Monk's-hood, *A. Napellus*.

A genus of 16 species, almost equally divided betwixt the alpine regions of Europe and Siberia.

373. AQUILEGIA. *L.* (Columbine.)

Calix none. *Petals* 5. *Lepanthia* 5, corniculate, situated between the petals. *Capsules* 5, distinct.

Leaves once or twice ternately divided; flowers terminal, scattered, reddish or violaceous.

SPECIES. 1. A. *canadensis*.—A genus of 6 species, partly indigenous to Siberia and Europe.

374. CIMICIFUGA. *L.* (Black Snake-root.)

Calix 4 or 5-leaved. *Petals* 4 to 8 deformed, thickish, sometimes wanting. *Capsules* 1 to 5, oblong, many-seeded. *Seeds* squamose.

Leaves large, usually biternately compounded; flowers spiked, terminal, white, spikes simple or paniculated; stamina subclavate, long and numerous, anthers small, adnate to the filaments.

SPECIES. 1. C. *racemosa* (*Actæa racemosa*. *L.*) 2. *fœtida*. 3. *americana*. 4. *palmata*. Does this exceptionable plant belong indeed to *Cimicifuga*?—A North American genus.

375. ASCYRUM. *L.* (St. Peter's-wort.)

Calix 4-leaved; the 2 interior cordate and larger. *Petals* 4. *Filaments* disposed in 4 parcels. *Capsule* oblong, 1-celled, 2-valved, included in the calix. (*Styles* 2 or 3.)

Suffruticose or herbaceous plants, very similar to the following genus; leaves opposite, entire, marked with resinous punctures; flowers solitary and terminal or subcorymbose. Seeds ponctate, attached to the margins of the valves.

SPECIES. 1. A. *pumilum*. 2. * *pauciflorum*. Decumbent, diffuse, small, with many stems; leaves approximate, linear-oblong, obtuse, rather minute; flowers rare, solitary, pedicell reflected, bibracteate at the base; style 1. HAB. In the open forests of Georgia. Suffruticose; leaves little more than a line wide, often nearly of equal breadth; flowers very rare; style unusually long, simple; stems fili-

17 *The Genera of North American Plants*

THOMAS NUTTALL, PHILADELPHIA, 1818.

A poor journeyman printer, Thomas Nuttall arrived in Philadelphia April 23, 1808, passenger on the *Halcyon* out of Liverpool. He was twenty-four. Three days later he is said to have attended Benjamin Smith Barton's botany lecture at the University of Pennsylvania.

Barton had planned a comprehensive account of North American plants; before Nuttall arrived he had employed Frederick Pursh to collect specimens for him. Now with Nuttall, "a young man of very fair character, and of great enterprise,"[17] Barton would again try to push forward his flora. Nuttall's pay was to be eight dollars a month. Barton equipped him with drying papers and portfolio for plants, a double-barreled gun, pistol, and dirk, arms quite beyond his experience. Trip followed trip with many a winter spent in Philadelphia working over his specimens.

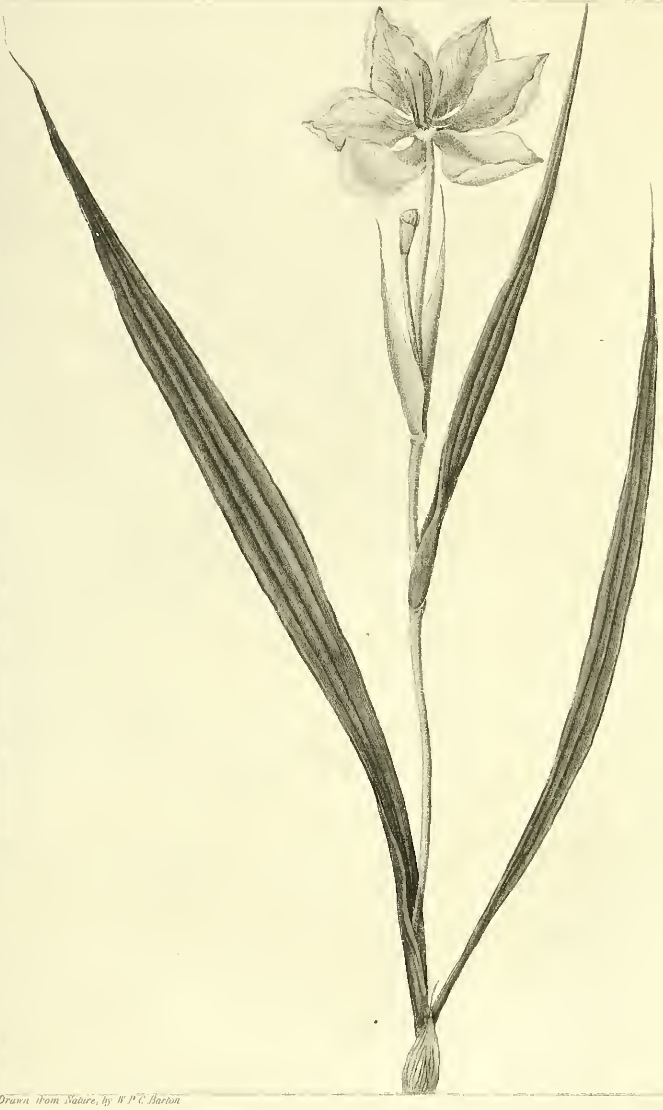
Nuttall's *Genera of North American Plants* was published in 1818. It is on this book that his botanical fame chiefly rests. Many eminent botanists gave it high praise. In 1834, botanist John Torrey stated that "the *Genera* contributed more than any other work to advance the accurate knowledge of plants in this country." The book included nearly one thousand plants, each listed by its botanical name followed by a description of habit or "mode of vegetation assumed by the generic group in imitation of Jussieu's *Genera plantarum*." It is said that, to save money, Nuttall helped set the type for his *Genera* himself.

Nuttall's horticultural interests were sometimes related to his financial need. It is clear that Nuttall sold seeds that he collected and that several of his offerings, including *Coreopsis maritima*, seaside coreopsis, were later exhibited by Robert Buist at shows held by the Pennsylvania Horticultural Society.

From Richard Henry Dana's *Two Years Before the Mast* we learn sailors observed Nuttall and nicknamed him "Old Curious." There he was wading in San Diego Bay "in a sailor's pea-jacket, with a wide straw hat, and barefooted, with his trousers rolled up to his knees, picking up stones and shells."

Pages from Nuttall's *Genera*.

Table 66



Drawn from Nature, by W P C Barton *G.B.Ellis Sc*

IXIA ACUTA

18 *A Flora of North America*

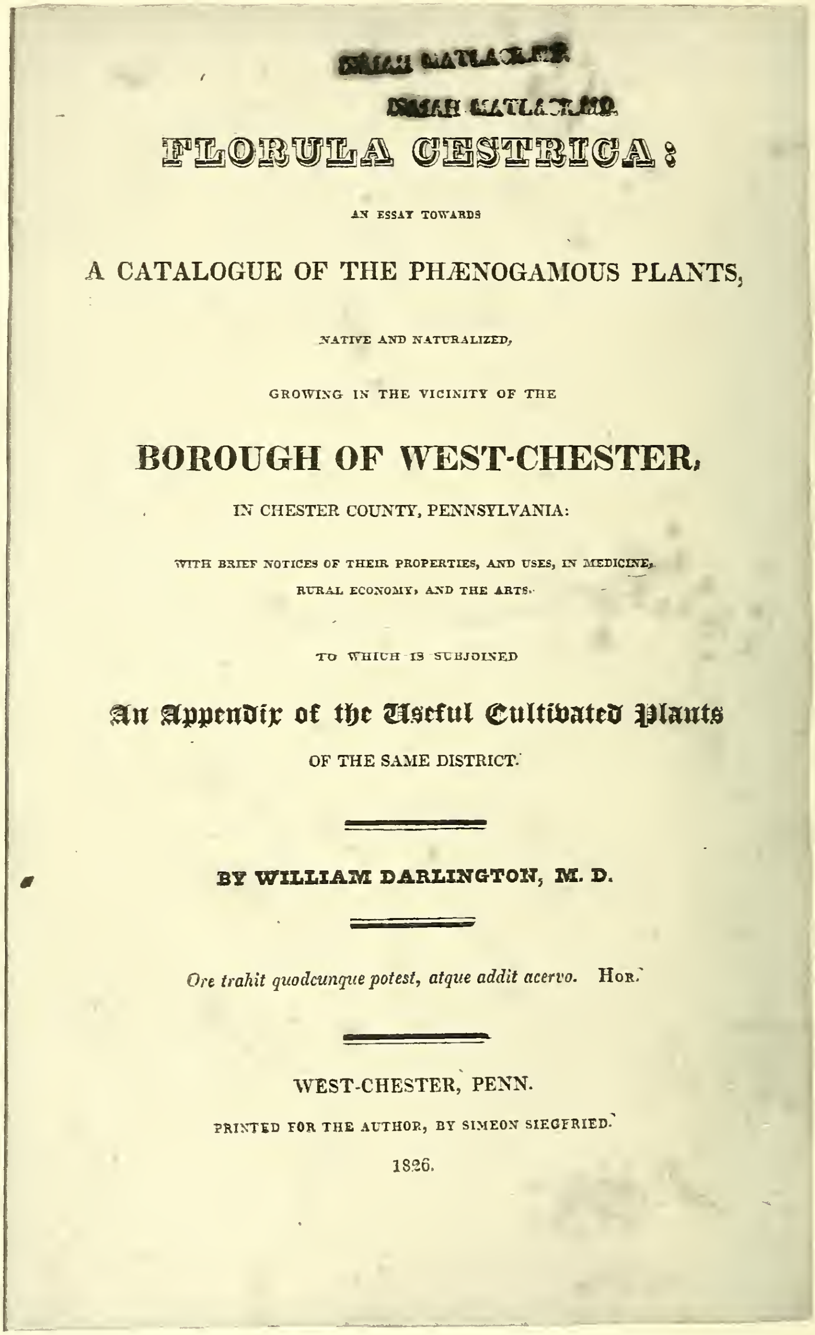
WILLIAM PAUL CRILLON BARTON, PHILADELPHIA, 1821–23.

A Flora of North America by Dr. William P. C. Barton was published in three volumes, the first appearing in 1821. The publishers reported excellent sales. The preface regretfully pointed out that many books on American plants had been written by foreigners, and strongly urged the encouragement of American writers. Barton emphasized the importance of botany and suggested that the agricultural, manufacturing, and medical interests of the country depend to a great degree on a wider knowledge of the science.

Barton was an ardent botanist, his enthusiasm evident throughout the *Flora*. Each plant is illustrated in color with its scientific and common names given. Detailed descriptions and geographical distribution follow the illustration. The plants drawn by Barton and colored by him and his wife show an extraordinary improvement over the ones the same two people had done for his *Vegetable Materia Medica* published in 1817–18. There is a possibility that some of the drawings were done by Joseph Mason who when young had done some backgrounds for Audubon.

Any study of early naturalists shows how often their paths crossed; great common interest drew them together as evidenced in Barton's account of *Ixia acuta*. He tells of Thomas Nuttall's bringing the roots from the Arkansas Territory, and of its flowering at Bartram's garden. "So very evanescent is the caerulean hue of this flower, that it faded perceptibly in thirty minutes"; the corolla had folded up in less than an hour. "The venerable William Bartram, who is still living at Kingsessing Gardens, mentions in his travels into Florida that he met with whole fields of the *Ixia caelestina*. . . . When I commenced the drawing of the plant in the presence of Mr. Bartram, he was of [the] opinion that the flowering plant was the same he had seen and figured. A little more attention to the characters to which I attracted his attention, however, convinced him it was a different species."

Ixia acuta is a member of the iris family (*Iridaceae*).



ISAIAH MATLACK M.D.
ISAIAH MATLACK M.D.

FLORULA CESTRICA:

AN ESSAY TOWARDS

A CATALOGUE OF THE PHÆNOGAMOUS PLANTS,

NATIVE AND NATURALIZED,

GROWING IN THE VICINITY OF THE

BOROUGH OF WEST-CHESTER,

IN CHESTER COUNTY, PENNSYLVANIA:

WITH BRIEF NOTICES OF THEIR PROPERTIES, AND USES, IN MEDICINE,
RURAL ECONOMY, AND THE ARTS.

TO WHICH IS SUBJOINED

An Appendix of the Useful Cultivated Plants
OF THE SAME DISTRICT.

BY WILLIAM DARLINGTON, M. D.

Ore trahit quodcunque potest, atque addit acervo. HOR.

WEST-CHESTER, PENN.
PRINTED FOR THE AUTHOR, BY SIMEON SIEGFRIED.
1826.

19 *Florula Cestrica*

WILLIAM DARLINGTON, PHILADELPHIA, 1826.

"If the human mind were even capable of universal knowledge, the period allotted to human life is altogether too brief for its acquisition"—so spoke William Darlington.[18] Farm boy become physician, congressman, banker, botanist, and author, he was Chester County's most celebrated citizen.

Benjamin Smith Barton's botanical lectures at the University of Pennsylvania fostered Darlington's abiding interest in horticulture. As surgeon on an East India merchantman, Darlington made botanical acquaintances in Calcutta; he had many correspondents in all parts of the world, and was honored by having a handsome California genus, *Darlingtonia*, dedicated to him by New York botanist John Torrey. Nevertheless, home county interests remained primary.

Darlington began *Florula Cestrica* when there were few catalogues of American plants "and those few far from being complete," he thought. He hoped other botanists would catalogue the plants of their own localities, ultimately producing a complete American flora.

Darlington's *Florula Cestrica*, published in 1826, and followed in 1837 by *Flora Cestrica* which covered all Chester County, accounts for seven hundred thirty-five native or naturalized species and one hundred eighteen cultivated in farm and garden, growing in the vicinity of West Chester. Particularly lively reading is the section called "Observations" which chronicles folk remedies of Chester County, the economy of crop plants, the relative abundance or rarity of most species, and refutation of other botanists' theories on controversial identifications. For the social historian, Darlington tells that cattail "hairs" for bedding are much inferior to straw or clean oats chaff. For the historian, he writes, "It is said the leaves [of New Jersey tea] were much used by the Whigs, during the American Revolution, as a substitute for the proscribed *Tea* of the English East-India Company: which circumstances alone, judging from the sensible properties of the plant, might be taken as pretty good evidence of their zeal in the cause!"

Title page from *Florula*.

PERIODICAL
CATALOGUE
OF
GREEN-HOUSE AND HARDY HERBACEOUS
PLANTS AND SHRUBS,
ORNAMENTAL AND FRUIT TREES,
BULBOUS AND TUBEROUS
FLOWERING ROOTS,
VEGETABLE AND FLOWER SEEDS,
CULTIVATED BY
D. & C. LANDRETH,
AT THEIR
NURSERIES AND GARDENS,
ON FEDERAL STREET NEAR THE UNITED STATES' ARSENAL,
AND FIFTH STREET BELOW FEDERAL.

WITH A LIST OF
Agricultural and Horticultural Implements,
CONSTANTLY FOR SALE AT THE
WAREHOUSE, NO. 85 CHESNUT STREET.

— located in 1824

TO WHICH IS ADDED,
A TREATISE
ON THE CULTIVATION OF VEGETABLES IN GENERAL,
Founded upon their own experience.

Philadelphia:
PRINTED BY WILLIAM STAVELY.

1832.

20 *Periodical catalogue of green-house and hardy herbaceous plants and shrubs &c.*

DAVID AND CUTHBERT LANDRETH, PHILADELPHIA, 1832.

Foremost among the English nurserymen who came to this country and left their labels on our trees and flowers was David Landreth. He arrived in Philadelphia in 1781 and within three years had opened the first seed business in America, an enterprise that grew into one of the most extensive and best-known nurseries of the period. Joined in business by his sons David and Cuthbert, Landreth, by 1824, devoted some thirty acres to growing plants for seed production, operated in two locations at a distance designed to prevent the mixing of varieties by cross-pollination.

Landreth's nursery specialized in what we would classify today as volume sales—popular farm and garden subjects and bedding plants. He enjoyed supplying his French-born clients with tomatoes (considered inedible by most Americans), okra from the French West Indies, and artichokes from the Mediterranean. Among other unusual items featured were the coral tree (*Erythrina crista-galli*) from South America, *Correa speciosa* from Australia, bird-of-paradise (*Strelitzia reginae*) from Africa, and bananas from Indo-Maylasia.

Landreth developed the first nursery stocks of camellias and rhododendrons in the city. By the last year of his business in Philadelphia (the nursery was moved to Bristol, Pennsylvania, about 1828), he had assembled fifty varieties of hyacinths, twenty-five varieties of camellias, several varieties of citrus, and thirteen species of magnolias.

The catalogue itself has lists of plants, seeds, and implements, more than seventy pages of them, surprising today's readers with the number and variety of the offerings.[19] In addition, it includes an extract from the Report of the Visiting Committee of the Pennsylvania Horticultural Society, made July, 1830, describing the nurseries and the collection of magnolias for which they were famous.

The Pennsylvania Horticultural Society library also has a photocopy of Landreth's catalogue for 1824.

Rooms.

NOVEMBER.

GENERAL OBSERVATIONS.

The remarks and instructions that are given last month for these apartments will equally answer here. Where the Dutch bulbs were omitted to be placed in glasses, they ought not to be longer delayed. A few pots of those that were planted in September may be placed in a warmer situation. If they were plunged in the ground, the roots will be strongly fibred, and will produce large flowers, providing the bulbs are of a good sort.

Oxàlis. The autumn flowering species will now be in bloom, and must be kept in the sun to make them expand freely. The neglect of this is the principal reason that these plants do not flower perfectly in Rooms.

Caméllias. These plants, where there is a collection, flower from this period to April; and the general desire to be fully acquainted with the method of their culture has induced us to be liberal in our observations on every point and period through the various stages of their growth and flowering. We will here only remind the enquirer, that a pure air, a damp atmosphere, and giving the plants frequent sprinklings, are the pre-

21 *American Flower Garden Directory*

THOMAS HIBBERT AND ROBERT BUIST, PHILADELPHIA, 1832.

Thomas Hibbert and Robert Buist were a formidable pair. Hibbert brought to the partnership experience gained operating the first noteworthy florist shop in Philadelphia and credit for having competed with the Landreths in introducing azaleas. Buist brought his training at the Edinburgh Botanic Garden and at Lemon Hill, and abilities that were to lead to genuine accomplishments. They bought M'Mahon's nursery in 1830, and two years later published the *American Flower Garden Directory*, containing "practical directions for the culture of plants in the hot-house, greenhouse, flower gardens and rooms or parlours, for every month in the year."

This is a "how-to" text in the truest sense. The authors cover details of plant management and in so doing give us a fascinating glimpse into the life of the gardener and greenhouseman in the first quarter of the nineteenth century. Some directions are completely familiar to the modern reader: the importance of syringing the hothouse plants, for example, or the instructions for repotting or pruning. Even the treatment of fertilizers (an infusion of bone dust, shavings, and sheep dung) and insecticides (tobacco smoke for aphids and thrips, syringing for red spider, and a bath of soap, sulfur, tobacco, nux vomica, and turpentine in river water for mealy bug) would be acceptable to today's organic gardeners.

As for conditions in the house, let the authors speak for themselves:

"Plants that are kept in rooms generally are such as require a medium temperature, say 40°. Sitting rooms or parlours, about this season, are for the most part heated from 55° to 65°, thus keeping the temperature from 15° to 25° higher than the nature of the plants requires. . . . Therefore as far as practicable, let the plants be kept in a room adjoining to one where there is fire heat, and the intervening door can be opened when desirable. They will admit sometimes of being as low as 33°."

The writings of Hibbert and Buist filled a need in the developing of American horticulture as evidenced by the number of times they were reprinted.

	BOTANIC NAMES	ENGLISH NAMES
902	Linum Trigynum	Three styled Flax
903	Amaryllis	
904	Gloxinia Speciosa	Showy
905	Maculata	Spotted
906	Justicia Caletrix	Yellow Flowered
907	Dracæna Terminalis	Stripe leaved
908	Gloxinia Maculata	Spotted
909	Vinca Rosea	Madagascar Perrywinkle
910	Gloxinia Maculata	Spotted
911	Mimulus Cardinalis	
912	Justicia Caletrix	Yellow
913	Tabernœmontana Coronaria Fl Pl	Double Flowered
914	Vinca Rosea	Madagascar Perrywinkle
915	Gloxinia Maeulata	Spotted
916	Marica Northiana	Yellow
917	Gloxinia Maculata	Spotted
918	Gardenia Radicans	Dwarf Cape Jasmine
919	Gloxinia Speciosa	Showy
920	Ardisia Crenulata	Crenulate leaved
921	Justicia Caletrix	Yellow Flowered
922	Marica Cœrulea	Blue
923	Passiflora Princeps	Free Blooming
924	Urtica Nevia	
925	Justicia Splendens	Spotted
926	Gloxinia Maculata	
927	Justicia Speciosa	Showy
928	Dracæna Ferrea	Purple Dragon Tree
929	Cantua Coccinea	Scarlet Cantua
930	Eranthemum Pulchellum	Beautiful
931	Vinca Roxea	Madagascar Perrywinkle
932	Sinum Trigynum	Three styled Flax
933	Passiflora Princeps	Free Blooming
934	Gloxinia Maculata	Spotted
935	Bletia Hyacinthina	Hyacinth like
935	Salvia Fulgens	Fine Flowering
937	Strelitzia Regina	
938	Passiflora Princeps	Free Blooming
939	Hedychium Coronaria	Crown
940	Ficus Nitida	Shining leaved
941	Gloxinia Maculata	Spotted
942	Ruellia Formosa	Scarlet Flowering
943	Justicia Splendens	
944	Vinea Rosea	Madagascar Perrywinkle
945	do	do do
946	Bletia Hyacinthina	Hyacinth like
947	Jasminum Trifoliatum	Double Tuscan
948	Rhus	
949	Gloxinia Speciosa	Showy

22 *Catalogue of Splendid and Rare Green House and Hot House Plants, To Be Sold By Auction, At Lemon Hill*

D. & C. A. HILL, AUCTIONEERS, PHILADELPHIA, 1838.

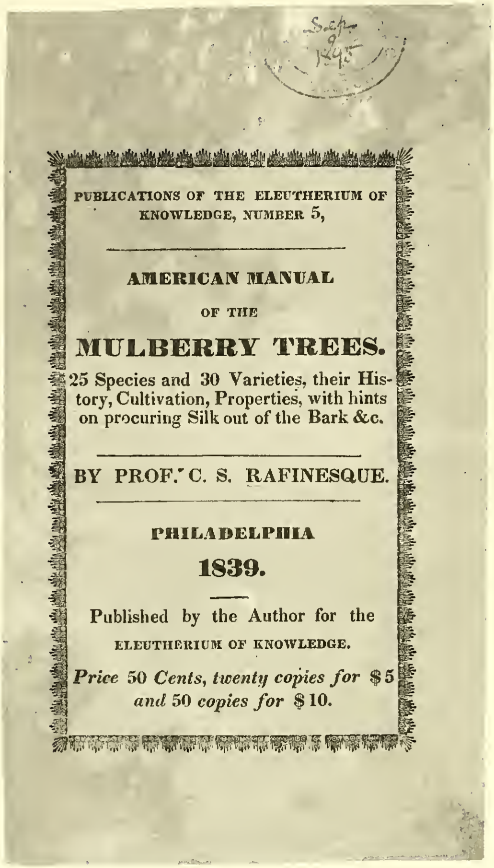
"For a long time the grounds of Mr. Pratt at Lemon Hill have been considered the show place of the city, and the proprietor, with praise worthy spirit, opening his long shaded walks, cool grottos, jet d'eau and superb range of hothouses to the inspection of the citizens, contributed in a large degree to improve the caste of the inhabitants and to inspire them with a desire to possess the more beautiful and delicate productions of nature." Thus wrote the landscape architect Andrew Jackson Downing in 1837. Henry Pratt died a year later at the age of seventy-six and his greenhouse plants were auctioned off, occasioning the auctioneer's catalogue displayed in the exhibit.

While they lasted, "Pratt's Gardens," as they were called, were a focal point for horticulture. David Landreth and Robert Buist served apprenticeships there. The last head gardener, Peter Mackenzie, was an acknowledged master, winning for Mr. Pratt, among many other awards, prizes from the Pennsylvania Horticultural Society for the first mango exhibited and for a "splendid specimen" of poinsettia with bracts twenty inches across.

Henry Pratt, a Philadelphia shipping merchant, bought the southern portion of Robert Morris's farm, "The Hills," in 1799. Morris, one of the nation's wealthiest citizens, had acquired the property from Thomas Penn. It had been part of Penn's farm "Springettsbury."

After the auction at Lemon Hill the property was purchased by the Bank of the United States for $225,000. In 1844 it passed to the City of Philadelphia to become a controlled reservoir of fifty-two acres, and by an ordinance of December 28, 1855, Lemon Hill became the forerunner of Fairmount Park.

Twenty-seven hundred plants representing seven-hundred different kinds were listed for sale.



Sep 9 1895

PUBLICATIONS OF THE ELEUTHERIUM OF KNOWLEDGE, NUMBER 5,

AMERICAN MANUAL

OF THE

MULBERRY TREES.

25 Species and 30 Varieties, their History, Cultivation, Properties, with hints on procuring Silk out of the Bark &c.

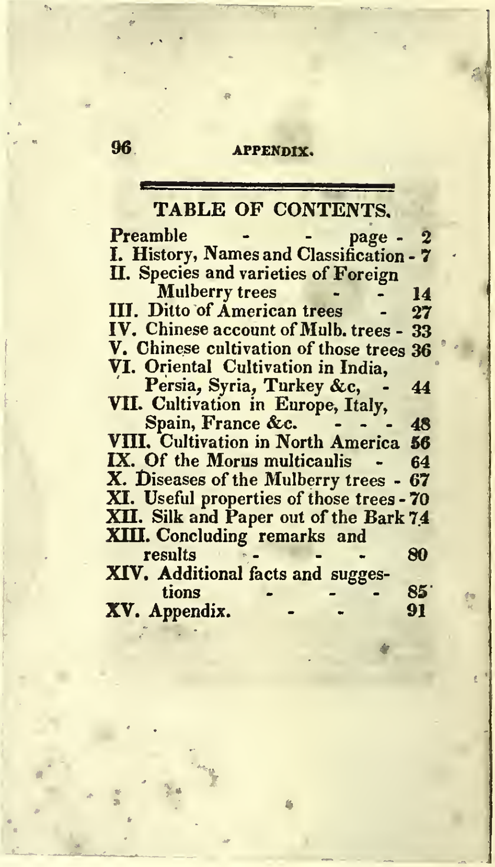
BY PROF. C. S. RAFINESQUE.

PHILADELPHIA

1839.

Published by the Author for the ELEUTHERIUM OF KNOWLEDGE.

Price 50 Cents, twenty copies for $5 and 50 copies for $10.



96 APPENDIX.

TABLE OF CONTENTS.

Preamble - - page - 2
I. History, Names and Classification - 7
II. Species and varieties of Foreign Mulberry trees - - 14
III. Ditto of American trees - 27
IV. Chinese account of Mulb. trees - 33
V. Chinese cultivation of those trees 36
VI. Oriental Cultivation in India, Persia, Syria, Turkey &c, - 44
VII. Cultivation in Europe, Italy, Spain, France &c. - - - 48
VIII. Cultivation in North America 56
IX. Of the Morus multicaulis - 64
X. Diseases of the Mulberry trees - 67
XI. Useful properties of those trees - 70
XII. Silk and Paper out of the Bark 74
XIII. Concluding remarks and results - - - 80
XIV. Additional facts and suggestions - - - 85
XV. Appendix. - - 91

23 *American Manual of the Mulberry Trees*

CONSTANTINE SAMUEL RAFINESQUE, PHILADELPHIA, 1839.

The Turkish-born son of a French father and a German mother, Constantine Samuel Rafinesque was erratic, hard-working, and lonely, much given to wandering. He first visited the United States from 1802 to 1815; after a ten-year sojourn in Europe, he returned, losing his botanical collection in a shipwreck off Long Island. His years as Professor of Botany and Natural History at Transylvania College in Lexington, Kentucky (1818–26), were the happiest period of his tumultuous life.

This little, dried-up, muffy-looking old man had a high opinion of his own abilities: "Versatility of talents and of profession, is not uncommon in America; but those which I have exhibited . . . may appear to exceed belief. I have been a Botanist, Naturalist, Geologist, Geographer, Historian, Poet, Philosopher, Philologist, Economist, Philanthropist . . . and I hardly know myself what I may become as yet. . . ."[20] Between 1828 and 1844, he wrote regularly for at least four periodicals and published eighteen books.

Twenty-five species and thirty varieties are described in the *Manual of Mulberry Trees*; it also contains information about "Their History, Cultivation, Properties, Diseases, Species and Varieties, &c., with hints on procuring Silk from their barks." Rafinesque states that "a cheap [50¢] complete Manual like this on this interesting subject, will not only be useful, but perhaps popular also, like the subject itself; and by widely spreading such permanent information throughout the counrty [sic] may help to hasten the time when we shall be realy [sic] producers of Silk to any required extent."

At the time the *Manual* was written there was widespread speculation that the cultivation of mulberry trees and raising silk worms could lead to a highly profitable American silk industry. The mulberries flourished, the silkworms did not, and the project was eventually abandoned.

According to Professor T. J. Fitzpatrick, an authority on Rafinesque, the *Manual* was Rafinesque's eight hundred ninety-fourth publication.

The exhibit copy of the *Manual* (courtesy of the Massachusetts Horticultural Society Library).

THE

THE ORCHARDIST'S COMPANION

A QUARTERLY JOURNAL,

DEVOTED TO THE HISTORY, CHARACTER, PROPERTIES, MODES OF CULTIVATION, AND ALL
OTHER MATTERS APPERTAINING TO THE

FRUITS OF THE UNITED STATES,

EMBELLISHED WITH RICHLY COLORED DESIGNS OF THE NATURAL SIZE, PAINTED FROM THE ACTUAL FRUITS WHEN
IN THEIR FINEST CONDITION, AND REPRESENTED APPENDED TO A PORTION OF THE BRANCH, WITH
LEAVES AND OTHER CHARACTERISTICS AS SEEN WHEN ON THE TREE. ALSO,
THE FLOWERS, CUT FRUITS AND STONES.

VOL. 1.---APRIL.

A. HOFFY, EDITOR AND PROPRIETOR, 41 CHESNUT STREET,

PHILADELPHIA.

1841.

24 *The Orchardist's Companion*

ALFRED HOFFY, ED. PHILADELPHIA, 1841.

Alfred M. Hoffy's *The Orchardist's Companion* was the first "magazine" devoted wholly to fruit culture. Little is known about its author and artist, but Hoffy must have possessed a tenacious spirit, as three times between 1841 and 1860 he tried and failed to establish a long-lasting periodical.

Hoffy came to Philadelphia from New York in 1838. Three years later, in January, 1841, he presented a prospectus of *The Orchardist's Companion* to the president and members of the Pennsylvania Horticultural Society. The next month the Society appointed a committee to evaluate Hoffy's work. Their report was most favorable: ". . . the *Orchardist's Companion* is calculated to have a beneficial tendency and ought to meet with the cordial support of the friends of horticulture."

The magazine was a quarterly, each issue consisting of twelve plates in fine color with accompanying text, intended to be bound together upon completion of the volume. Local art students were employed to color the plates. The back covers contained advertisements for Philadelphia seed houses. After only two volumes were issued, the high cost of producing such a finely illustrated work caused publication to cease.

The usual varieties of pears, apples, peaches, plums, raspberries, and strawberries were pictured along with new types such as the Tippecanoe peach, grown by George Thomas of Fourth Street and first exhibited at a Pennsylvania Horticultural Society show. There is a particularly appealing illustration of the popular Seckel pear, discovered about 1760 on the Seckel farm near Philadelphia.

Although many of the fruit varieties Hoffy knew have passed into history, his lithographs provide us with a vivid pictorial record of fruit popular at the time.

Title page from *The Orchardist's Companion.*

CONTENTS.

Rosa Alpina,
The Boursault Rose, - - - - - - 13

Rosa Sempervirens,
The Evergreen Rose, - - - - - 15

Rosa Banksiana,
The Lady Banks Rose, - - - - - 18

Rosa Multiflora,
The Multiflora Rose, - - - - - - 20

Hybrid Climbing Roses, - - - - - 23

Rosa Rubifolia,
The Prairie Rose, - - - - - - 26

Rosa Rubiginosa,
The Sweet Brier, - - - - - - 31

Rosa Lutea,
The Yellow Austrian Rose, - - - - - 34

Rosa Spinosissima,
The Scotch, or Burnet Rose, - - - - - 36

Rosa Centifolia,
The Provins, or Cabbage Rose, - - - 38

Rosa Centifolia Muscosa,
The Moss Rose, - - - - - - 42

Rosa Gallica,
The Rose of France, - - - - - - 48

Striped, Spotted, and Marbled Roses, - - 54

Rosa Alba,
The White Garden Rose. - - - - - 58

Rosa Damascena,
The Damask Rose, - - - - - - 60

Hybrid Chinese Roses, - - - - - 62

Planting, - - - - - - 72

Growing Roses from Seed, - - - - 74

Propagation of Garden or June Roses, - - 78

Propagation by Budding, - - - - 80

Propagation by Grafting, - - - - 85

Noisette Roses, - - - - - - 88

Rosa Indica Odorata,
The Tea Scented Rose, - - - - 106

Rosa Lawrenciana,
The Miniature Rose, - - - - - 134

Rosa Bourboniana,
The Bourbon Rose, - - - - - 136

Remontantes,
Hybrid Perpetual Rose, - - - - 147

Perpetual Damask Roses, - - - - 152

Rosa Microphylla,
Small Leaved Rose, - - - - - 159

Rosa Moschata,
The Musk Scented Rose, - - - - 163

Cultivation of Roses in Pots,
For the Green-house or Rooms, - - - 165

Insects Injurious to the Rose, - - - 168

Propagation of Roses
That Bloom all the Season, - - - - 171

25 *The Rose Manual*

ROBERT BUIST, PHILADELPHIA, 1844.

A paradigm of the early nineteenth-century horticulturist, Robert Buist compiled an impressive list of accomplishments: founder of one of the nation's first great nurseries, introducer of the poinsettia to the trade, the most prolific horticultural writer of his time, an officer of the Pennsylvania Horticultural Society, and frequent exhibitor at its meetings.

The Rose Manual was the first book on the rose from the gardener's viewpoint. It passed through four editions in ten years, outselling the guides to rose-growing by his competitors, William Prince and Samuel Parsons.

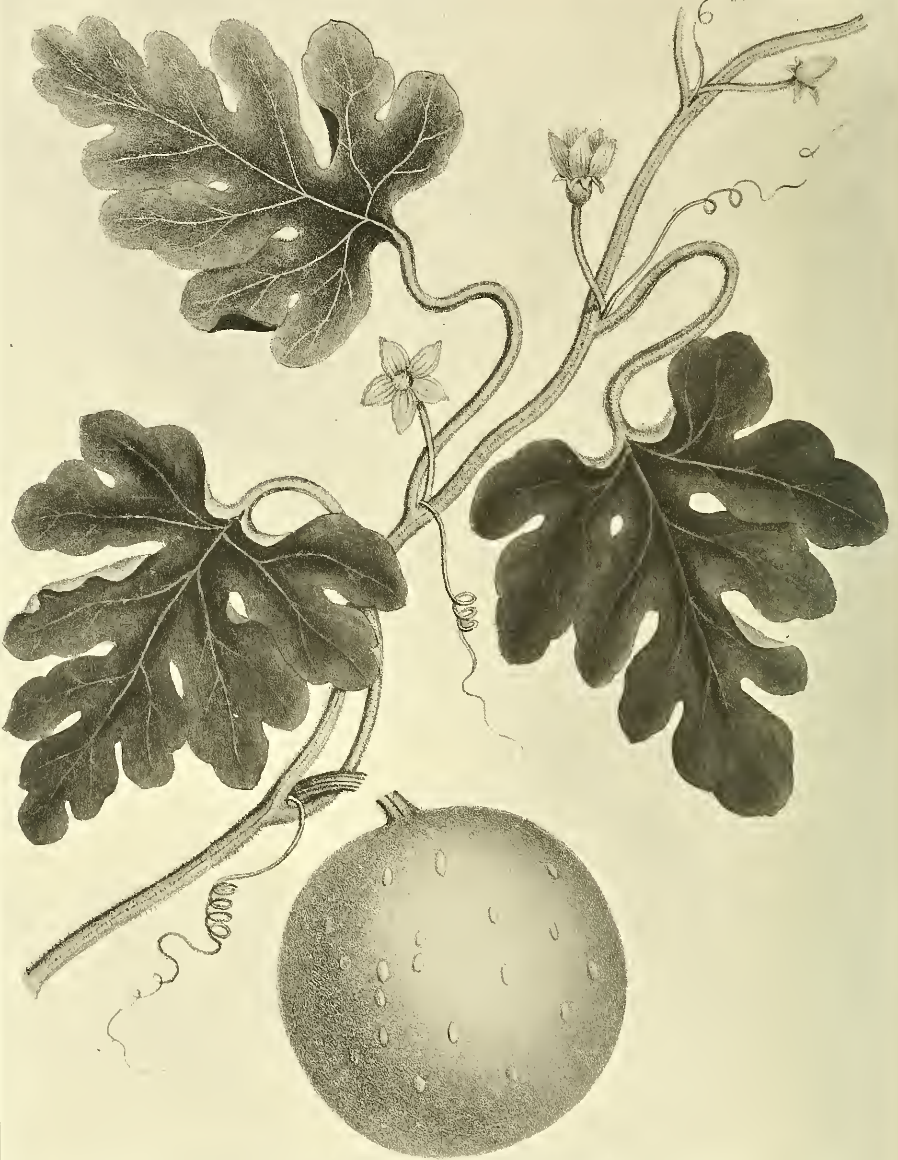
Buist's Hybrid Perpetual Rose, introduced in England by Sir Joseph Banks in 1789, carries a particular historic fragrance. Called Old Blush or Chinese Monthly, it was brought back with silks and tea in the clipper ships that took our ginseng to China. Old Blush gave rise to the rose that bloomed twice a year, so the perpetual blooming roses of modern gardens owe their origins to this, the most important of the modern rose's progenitors.

The contents of *The Manual* are intriguing. There are separate descriptions of twenty-two groups of roses with a history and cultural directions for each. A great number have since been dropped from commercial cultivation, but there are growing ranks of old rose fanciers who are rediscovering them in old gardens and particularly in cemeteries, where they have grown undisturbed for decades. Information is also offered on planting, growing from seed, propagating by budding and grafting, and cultivation in pots.

This decade was not only perfumed by the beloved rose but embellished by no less than twelve books of flowers and poesy praising the rose: *The Lady's Book of Flowers and Poetry* (1842), *Floral Offerings*, *The Parlor Book of Flowers*, *The Bouquet for 1847*, (all 1847), and *Floral Year*, *Ladies' Wreath*, *Poetical Language of Flowers*, and *Flowers Personified* (1848–49). The Victorian epoch was upon us.

Contents of *The Rose Manual.*

Plate XIX.



CITRULLUS COLOCYNTHIS.

26 *Illustrations of Medical Botany*

JOSEPH CARSON, PHILADELPHIA, 1847.

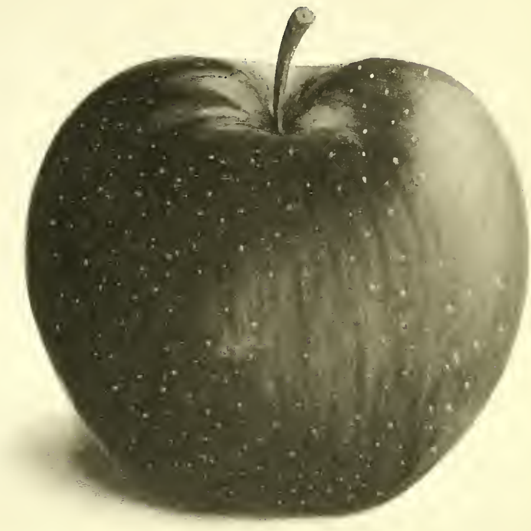
Dr. Joseph Carson conducted a successful medical practice and held a variety of public positions, but his main interests were botany, writing, and teaching. He was a popular teacher, having a good relationship with his pupils and fellow professors, and was the author of many botanical and medical papers.

At the age of twenty-eight Carson was appointed Professor of Materia Medica at the Philadelphia College of Pharmacy. The year before he had begun an association with the Academy of Natural Sciences that was to last forty-three years; he helped arrange the Academy's herbarium, served as librarian, secretary, and as one of its vice-presidents. He made prolific contributions to the *American Journal of Pharmacy.*

Carson collected specimens of drug plants and in his introduction to the *Illustrations of Medical Botany* he commented that "many of the representations are entirely new." He also used the "best figures" from *Botanical Magazine*, Humboldt and Bonpland, Hayne, *et cetera*, as models for many of his illustrations. One of the medicinals illustrated was the "wild vine" (*Citrullus colocynthis*) of the Bible, (II Kings, iv.39); the fruit pulp was used as a cathartic in Carson's day. His two-volume work, rare today, was originally issued in five thin volumes with gray boards. The medical historian Dr. Francis R. Packard says many of the one hundred plates were drawn and colored by Carson.

Carson's *History of the Medical Department of the University of Pennsylvania* is his best-known work; it delayed and ultimately prevented his writing the more ambitious materia medica that was his plan.

Citrullus colocynthis.



Esopus Spitzenburg

27 *The Fruit and Fruit Trees of America*

ANDREW JACKSON DOWNING, NEW YORK, 1847.

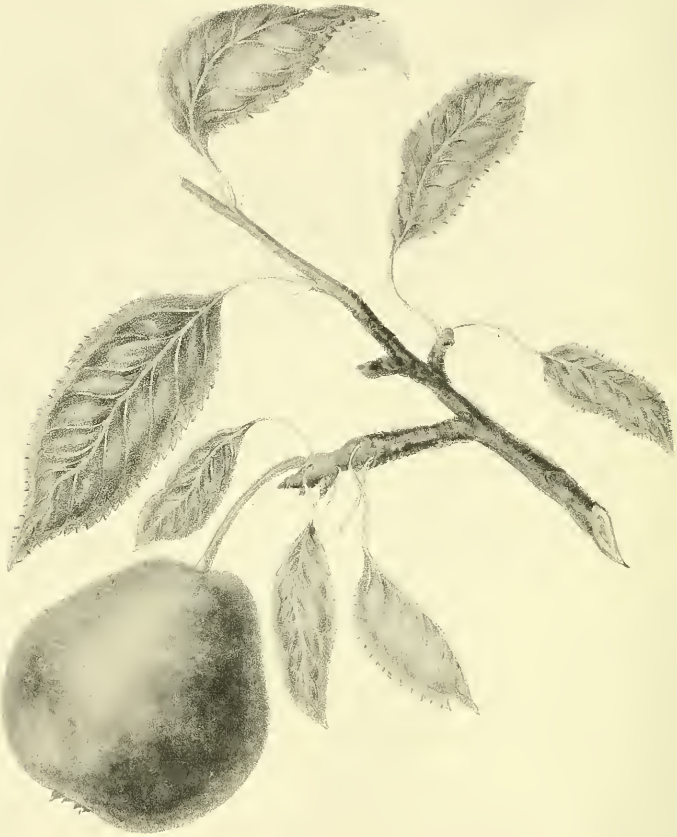
Born in the Hudson Valley, where his father had settled and established a nursery, Andrew Jackson Downing was strongly influenced by his beloved home and hills throughout his life. With his brother Charles, Downing grew fruit trees and, in 1845, published *The Fruit and Fruit Trees of America.* It was the most comprehensive work in its field up to that time, and established its author as the leading pomologist of this country. It was reprinted thirteen times in the next seven years, and after Andrew's death, Charles brought out revisions until 1881. The illustrations of the first edition were uncolored, but later editions were embellished with handsome colored engravings of apples, pears, and small fruits. The exhibit copy contains all these colored plates and has become a rare book in consequence, since the plates were removed from many of the other copies and sold separately for framing. Downing quoted from eighty references, going back to John Ray (1628–1705), an eminent English botanist.

Downing's earliest work, *A Treatise on the Theory and Practice of Landscape Gardening, Adapted to North America*, published in 1841, owes much to the writings of John Claudius Loudon, a pioneer in the modern philosophy of parks as "lungs for the city." A chain of influence linked Loudon, Downing, and Frederick Law Olmsted, the eminent American landscape architect and park designer, in the naturalistic tradition of landscape design. Fairmount Park in Philadelphia owes a debt to Downing, for its creation was in part due to enthusiasm aroused by him.

In 1852, while Downing was traveling from Newburgh, New York, on the steamer *Henry Clay*, the boat caught fire and he was drowned attempting to save other passengers. He was only thirty-seven years old. In what was called a "national calamity," the Pennsylvania Horticultural Society joined in the eulogy for Downing, a member and frequent exhibitor of fruit varieties at its shows.

Downing described all the finest varieties of fruit, native and foreign, cultivated in America.

The American Pomologist Pl.



PENNSYLVANIA PEAR

Fr [illegible] Holly:

[illegible]

28 *The American Pomologist*

WILLIAM D. BRINCKLÉ, ED. PHILADELPHIA, 1851.

In 1851, Alfred Hoffy, artist, author, and pomologist, joined with the physician and amateur pomologist William Draper Brincklé to publish *The American Pomologist.*

The rise of public interest in fruit-growing was hastened by the growth of cities and the building of the Erie Railroad. Fruit and vegetable production expanded dramatically, and New York City was the market. In June, 1847, a single train delivered eighty thousand bushels of strawberries to New York. New Jersey became an important center for strawberry, apple, and peach growing. Railroads grew rapidly and special express trains were scheduled to rush quality fruits to New York mansions and hotels. Literature on fruit-growing burgeoned.

The American Pomologist, which appeared only once, contained ten plates and accompanying text for each fruit, describing it in minute detail: size, form, skin, stem, calyx, flesh, flavor, maturity, leaf, and wood. A history was also provided.

Brincklé's *American Pomologist* was important for the system it offered for fruit nomenclature. Confusion was rampant before the 1840's when he began to organize variety names into a uniform arrangement. His efforts, and those of the American Pomological Society, lead to the "Rules of American Pomology" issued in 1847. In Robert Buist's opinion, "Dr. Brincklé stood at the very head of the pomological fraternity, and [did] more for the science than any other person, whether American or European."[21]

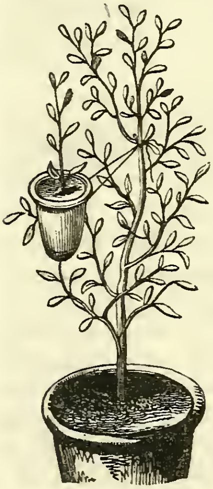
Dr. Brincklé lived in Girard Row at 335 Chestnut Street, "then the most distinguished range of houses in Philadelphia." It was in his fourth-story front room that he nurtured pots of strawberries and carried out crosses with high success. Active for many years in experimenting with fruits, he derived his major success from the development of the European raspberry, *Rubus idaeus*, which had been brought to this country about the turn of the century.

The Pennsylvania Pear originated in the late eighteenth century in the garden of John B. Smith in the District of Moyamensing. The name was given to it by the Pennsylvania Horticultural Society.

into the main stem, while a small quantity is allowed to rise out of the latter into the former; the effect of this being to compel the returning sap to organize itself externally as roots, instead of passing downwards below the bark as wood. The bending back is to assist in this object, by preventing the expenditure of sap in the formation, or rather completion, of leaves; and the silver sand is to secure the drainage so necessary to cuttings.

In most cases, this is sufficient; but it must be obvious that the exact manner in which the layering is effected is unimportant, and that it may be varied according to circumstances. Thus, Mr. James Munro describes a successful method of layering brittle-branched plants by simply slitting the shoot at the bend, and inserting a stone at that place (*Gardener's Magazine*, ix. 302): and Mr. Knight found that, in cases of difficult rooting, the process is facilitated by ringing the shoot just below the tongue, about midsummer, when the leaves upon the layers had acquired their full growth (*Hort. Trans.*, i. 256); by which means he prevented the passage of the returning sap further downwards than the point intended for the emission of roots.

22



It will sometimes happen that

29 *The Theory of Horticulture*

JOHN LINDLEY, NEW YORK, N.Y., 1852.

Second American edition, with notes, etc., by Andrew Jackson Downing and Asa Gray

John Lindley's *The Theory of Horticulture* grew out of the potting soils of Chiswick and the Chelsea Physick Garden of London. Andrew Jackson Downing quickly realized that it was a book of great value for American gardeners, and in 1841 brought out an edited version with adaptations to American soils and climate. Downing, a member of the Pennsylvania Horticultural Society, was just at the beginning of his notable horticultural career when he prepared the first edition.

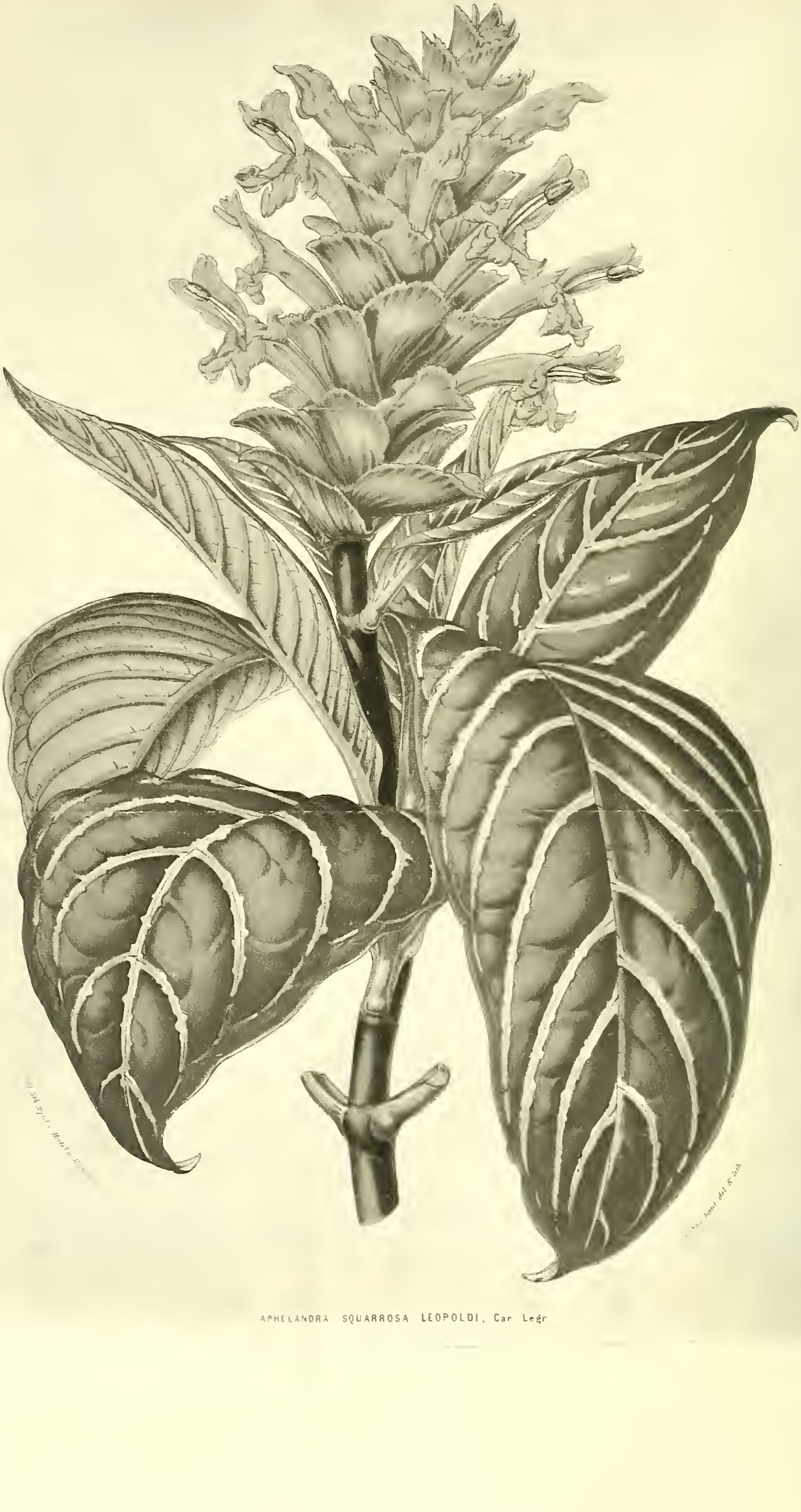
John Lindley was both a botanist and a horticulturist, a practical gardener, writer, and teacher. He did much work on botanical classifications and many of his writings were on that subject. *The Theory of Horticulture* is, however, a practical book on gardening, the subtitle reading "An attempt to explain the principal operations of gardening upon physiological principles."

Very little such work had been previously attempted and few of the amateur or even professional horticulturists understood the "why" behind their actions in caring for the plants they grew. It was to fill this need that Professor Lindley wrote his book, published in London in 1840.

By far the larger part of the work is instructional, dealing with bottom heat, ventilation, layering, budding and grafting, potting and pruning, all considered against the physiological principles upon which the operation of horticulture essentially depends.

Botanist Asa Gray's small part in supplying footnotes for the book merits a note. Gray was in New York in 1841 and probably knew Downing. Since the publishers Wiley and Putnam brought out both Gray's *Botanical Textbook* and Downing's *Treatise on the Theory and Practice of Landscape Gardening*, it is easy to imagine the alliance between the two young men, a landscape gardener and an enterprising botanist.

An illustration of propagation by layering.



APHELANDRA SQUARROSA LEOPOLDI, Car Legr

30 *Philadelphia Florist and Horticultural Journal*

R. ROBINSON SCOTT, PHILADELPHIA, 1852–55.

The progress of Robert Robinson Scott's horticultural career, which had advanced from the Belfast Botanic Gardens to the Royal Gardens at Kew, was interrupted when he left Kew to devote himself to "the wrongs of Ireland" and aid in the Smith Rebellion. His political fervor eventually waned and he emigrated to Philadelphia where he was employed at Robert Buist's nursery.

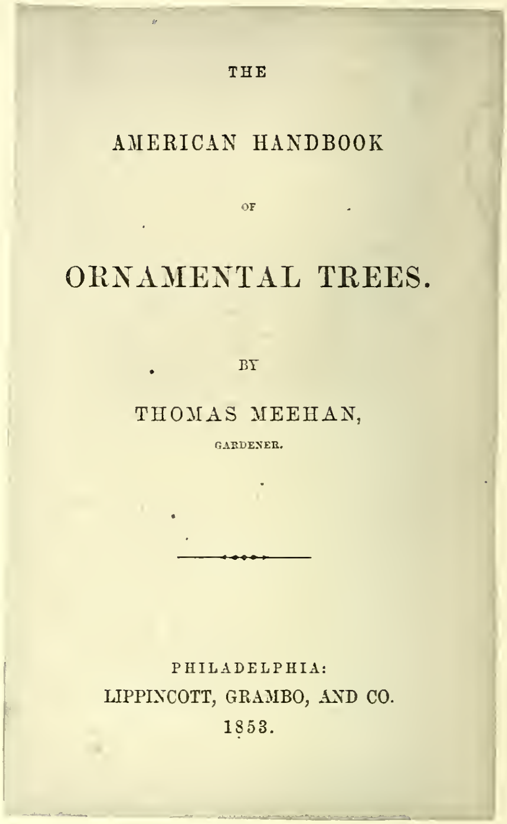
On the masthead of its first issue, May, 1852, the *Philadelphia Florist* announced that the magazine was "conducted by a Committee of Practical Gardeners, R. Robinson Scott, Editor, No. 48 S. Third Street, above the Girard Bank, up stairs." The serious intent of the magazine was exemplified in its first article on the superiority of the Natural System of Jussieu over the classification of Linnaeus. However, the largest amount of material was directed toward the "working gardener."

Thomas Meehan, the distinguished Philadelphia horticulturist, wrote that "without a dollar of capital [Scott] started the 'Philadelphia florist,' which came very near being a permanent success." Unfortunately, it ceased publication in 1855 after four volumes. Had it succeeded, Meehan said, there would have been "no room in the United States for another magazine of like character."

Meehan himself contributed to the first and several later issues. The recurring topics included theory and practice of pruning, foreign grapes, memorials for botanists and gardeners of the past, and reports on the doings of garden societies here and abroad. When the imperfections of the Pennsylvania Horticultural Society were under review, Meehan wrote: "a society is not an individual, and *some* members must concede *something* [italics are Meehan's] in all detail matters."

Scott's name is preserved in Scott's spleenwort, a hybrid fern now known as *x Asplenosorus ebenoides*, which Scott discovered on the west bank of the Schuylkill River near Manayunk in 1862, and described in Meehan's *Gardener's Monthly* three years later. Scott's spleenwort was exhibited at a meeting of the Pennsylvania Horticultural Society in March, 1865, but its particular interest as a demonstrated intergeneric cross between the walking fern and ebony spleenwort had to wait for recognition until the twentieth century.

The Zebra Plant remains a popular house plant today.



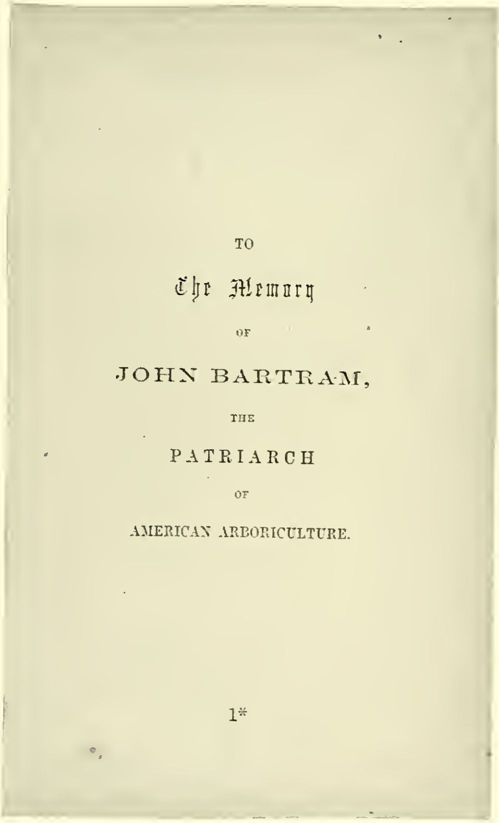
THE

AMERICAN HANDBOOK
OF
ORNAMENTAL TREES.

BY

THOMAS MEEHAN,
GARDENER.

PHILADELPHIA:
LIPPINCOTT, GRAMBO, AND CO.
1853.



TO
The Memory
OF
JOHN BARTRAM,
THE
PATRIARCH
OF
AMERICAN ARBORICULTURE.

1*

31 *The American Handbook of Ornamental Trees*

THOMAS MEEHAN, PHILADELPHIA, 1853.

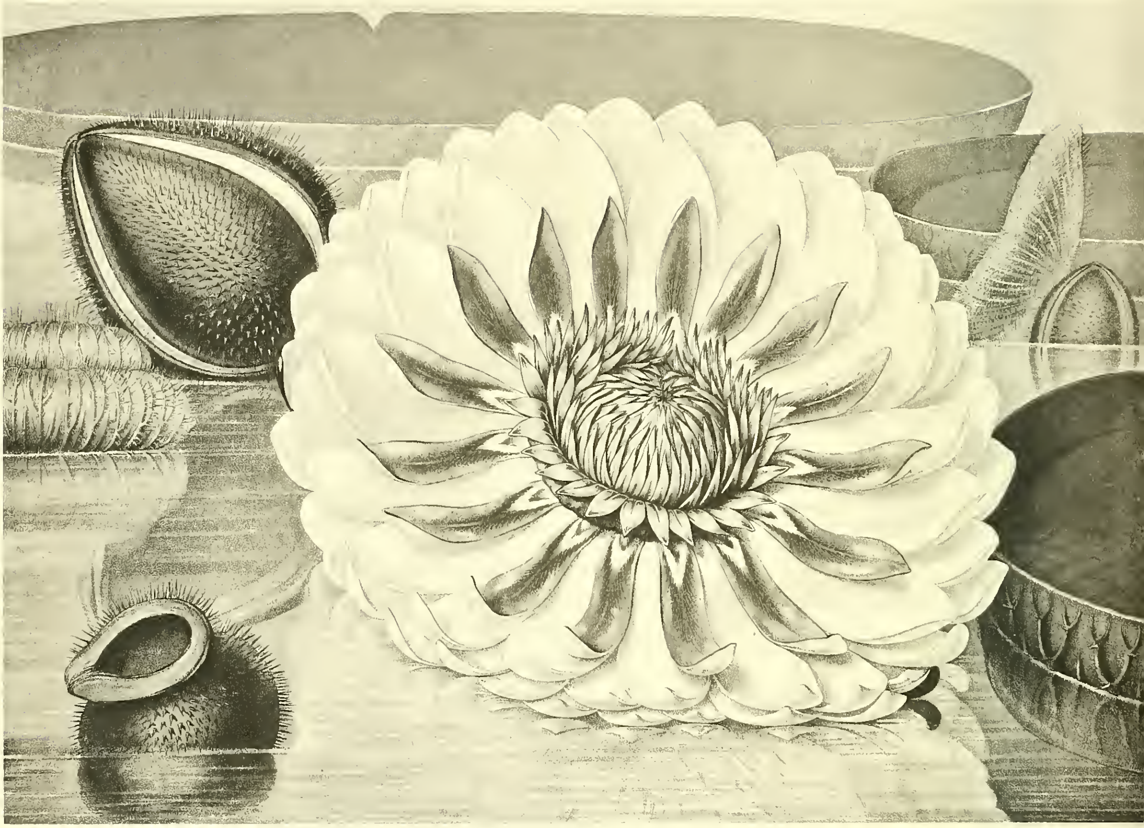
Thomas Meehan, an Englishman trained as a botanist at Kew, came to America in 1848 with twenty-five dollars in his pocket. He was gardener for Robert Buist, then for Andrew Eastwick who had purchased the Bartram property.

It was while Meehan was employed by Mr. Eastwick and working on the renovation of Bartram's Garden that he prepared a list of trees growing there. His friend William Darlington persuaded Meehan to enlarge the scope of his catalogue. From it the *American Handbook of Ornamental Trees* was published in 1853. Meehan speaks of the great importance of trees, gives directions for planting, then lists about two hundred eighty-two with descriptions of their characteristics. The style is clear English; Latin names are given, and recommendations for propagation. Meehan states that "nothing has been admitted into the body of the work that has not been the result of the personal experience of the author. . . . No tree is described as being in cultivation which the author has not himself seen. . . ."

Meehan has been described as "one of the most brilliant horticulturists of his time."[22] He became a member of the Pennsylvania Horticultural Society in 1850 and was its corresponding secretary for years. In 1882 he was elected to the Philadelphia Common Council, fostering the development of small parks throughout the city. Largely through his efforts twenty-eight parks were set aside, including Bartram's Garden which had fallen into neglect after Eastwick's death.

The distinguished editor, publisher, and rosarian J. Horace McFarland gave Meehan warm praise: "I think if Pennsylvania had done no other thing for horticulture than to furnish a home for Thomas Meehan . . . writer, editor, botanist, biologist, legislator and nurseryman, and . . . better than all of these, that precious jewel of democracy, a good citizen, we would deserve well of the world."[23]

The exhibit copy of *The American Handbook* belonged to Meehan.



Royal Water-Lily (*Victoria regia*)

32 *Victoria regia*

JOHN FISK ALLEN, BOSTON, 1854.

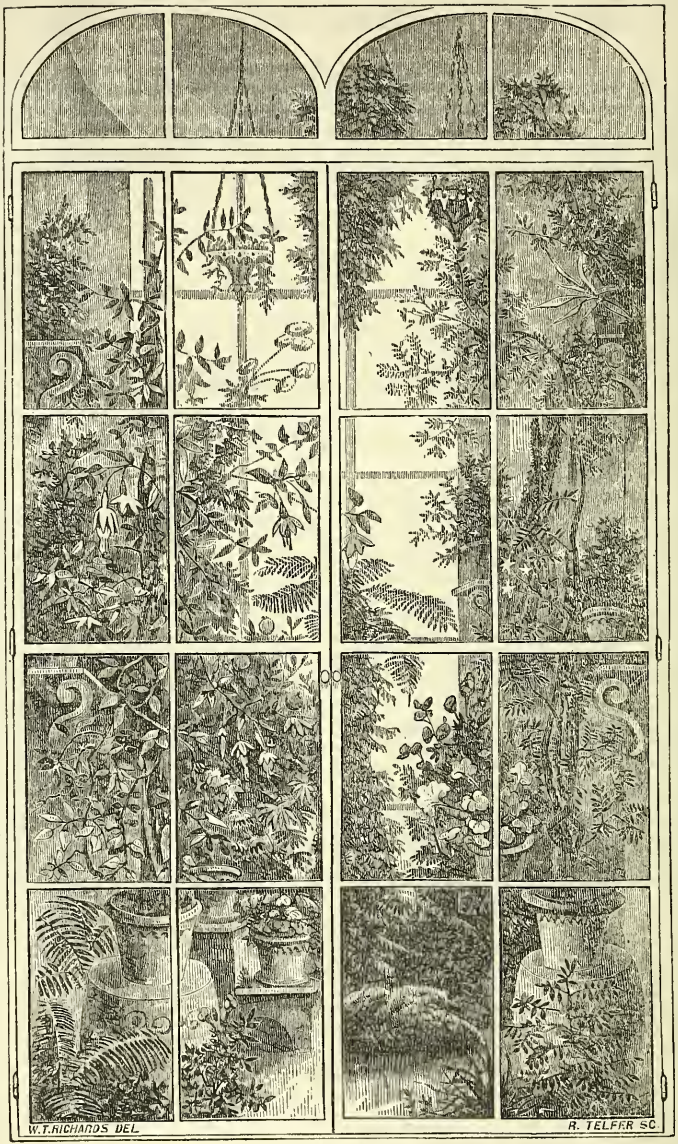
The elephant folio *Victoria regia* of John Fisk Allen is in keeping with the subject: the "Great Water Lily of America." The subtitle tells us more: "with a brief account of its discovery [along jungle rivers in South America] and introduction into cultivation [by the Royal Botanic Gardens, Kew] with illustrations by William Sharp [English-born pioneer in color lithography who had come to Boston in 1838] from specimens grown at Salem, Massachusetts, U.S.A." The dedication is "To Caleb Cope, Esq. . . . to whose zeal in horticulture we are indebted for the introduction to this country of many rare and beautiful plants . . ." and brings us to Philadelphia. It was at Springbrook, Cope's country seat overlooking the Delaware River, that the great water lily was first cultivated in the United States and flowered August 21st, 1851. By September, 1853, it had opened one hundred thirty-seven of its marvelous flowers. Cope wrote to Andrew Jackson Downing that the flower was three inches larger and the spectacular floating leaves six inches larger than any grown in England.

Allen was the "unquestioned authority on grape cultivation" at the time. His *Practical Treatise* on grape-growing went through three editions. We do not know how many copies of *Victoria regia* were printed but it sold for £2 10s. Thomas Meehan announced in the *Horticulturist* for April, 1852, that "anyone forming a tank for the Victoria" might apply to him for a plant.

Orphaned as a boy, Cope clerked in a store, entered his uncle's shipping business that engaged in the East India trade, and became a director of the United States Bank when Nicholas Biddle was president. Both were horticulture enthusiasts. Merchant, financier, man of affairs, "of noble impulses, benevolence and piety," Cope served as president of the Pennsylvania Horticultural Society for ten years, from 1842 to 1851. Of the water lily he said, "The Victoria is one of the few things that has not been exaggerated. It is truly a wonderful plant."

The Pennsylvania Horticultural Society awarded Caleb Cope its gold medal in 1851, "For having cultivated Successfully the *Victoria regia*."

Fig. 58.


W.T.RICHARDS DEL.
R. TELFER SC.

A Plant Cabinet.

33 *American Gardener's Calendar*

BERNARD M'MAHON. REV. ED. BY JOHN JAY SMITH,
PHILADELPHIA, 1857.

The eleventh edition of M'Mahon's *Calendar* appeared twenty-nine years after his death and was extensively revised by John Jay Smith. This last edition bore slight resemblance to its namesake of earlier years. The illustrations were the most striking change: the new edition contained over fifty whereas none had appeared in the 1806 *Calendar*.

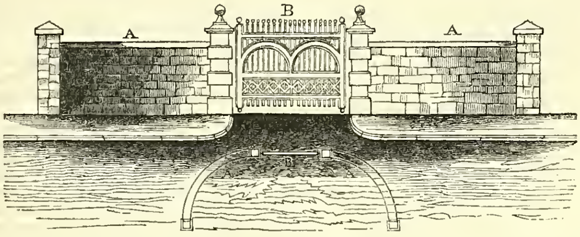
Smith remembered M'Mahon and his wife, Ann, who for some years after her husband's death continued to run both the greenhouse and nursery at Upsala and the seed store in Philadelphia. A touching tribute to the M'Mahons in the form of a brief memoir by Smith is included at the beginning of the 1857 edition. A letter from William Darlington reprinted in the memoir commends Smith for producing the new edition of the *Calendar* and gives some personal impressions and recollections of his friend M'Mahon, to whom he credits the development of "scientific horticulture" in Pennsylvania.

The frontispiece of the *American Gardener's Calendar* highlights the Great Exhibition at London in 1851. For horticulture, as for commerce and industry, the Exhibition stimulated innovative advances. The Pennsylvania Horticultural Society received a parcel of garden novelties that its member Ellis Yarnell had brought back from the East India Company exhibit.

It is fitting that M'Mahon who had so many interests should have had an editor who also had a varied career. Apart from his writings, Smith was secretary to the company operating Conestoga wagons between Philadelphia and Pittsburgh, a maker of durable ink, and worked successfully in the mushroom industry. With his landscaping and support of Laurel Hill Cemetery, he made a lasting contribution to the beautification of Philadelphia.

Parlor gardening had become very popular by the mid-1880's.

putation for the correct taste that pervades every part of it. We have been most kindly permitted by Mr McKean to take a drawing of his gate for our paper, an engraving of which we annex.



The posts and side walls are of stone, and the gate of wood. The posts are eight feet high above the surface of the ground, and are of stone, 21 and 23½ inches square alternately, as represented. The gate is made of yellow pine, painted a very dark green.

In front of the gate we give the ground-plan of wall on each side to show the curve.

A A wall. *B* gate.

ALEXANDER VON HUMBOLDT.

The death of this truly great man has called forth a host of biographies in the journals and periodicals. So far, however, we have not seen any thing like a satisfactory attempt to analyze the working of his mind. We want to honor his memory, and as our read-readers and ourselves will be able to do that by a true appreciation of his genius, we here extract the following graphic passages from an article in the *Augsburger Algemeine Zeitung*, one of the ablest and most influential German dailies:

"Humboldt has left us. Those eyes are closed now and for ever, which have known more of the universe, studied it closer, and comprehended it better than ever mind of man did before.

"A time will come when, from his appearance, a new period of the mind's history will be dated; for he it was who made the first attempt to comprehend the whole creation into one great whole, and to explain all its phenomena from positive laws. And he succeeded, too, in this gigantic work by grasping all the branches of knowledge *together*, showing them to be dependent of and supporting one another. He found a heap of building-stone scattered about. He collected that heap, and added more stone of his own. But all this is subordinate to the one great and immortal work—the structure of 'Kosmos;' *id. est.*, the universe *understood*.

"Future generations will have to fill up in it many a gap, to correct here and there, and to change many a hypothesis in it. Every work which is built up by way of inductive reasoning, and based on the knowledge of single facts, must naturally have the same fate. But as to the plan and its execution, its substance, and its larger features, there will remain but little chance for correction as long as the human mind does not change its nature. The road taken by Humboldt was the only right one, his goal the only satisfactory one. To reach this goal there was required an equally keen perception of microscopic details and of the great laws of nature, an untiring industry for collecting and studying all phenomena, as well as for examining them from *different* views, a complete saturation and clinging to facts, as well as a complete mastery and independence of them. Details dared never to override the whole—the whole never push into neglect the smallest detail.

"The great sage passed nearly ninety years in wandering through the world, observing it, investigating it, treading all its domains, the telescope and the microscope, the surface of the earth and the depth of its deepest mine. Still these ninety years have hardly sufficed for the great work of his life.

"When he had put the last finish to it, he left the scene—his work was done, accomplished, stood the task of his existence.........The motto of his great cotemporary might also have been his: 'Nature! my divinity art thou! Thee will I serve through life.' Humboldt's nature, however, included also mankind, and he has lived and worked for mankind. 'Truth,' he once said, 'is her own aim, but we value her for the sake of human kind alone.'

"Humboldt was a German, and not merely by accident, for we see in him the Germanic character in its noblest and fullest form. We mean his 'many-sidedness' in knowledge, the moral height of his soul, the depth of his heart, his ceaseless industry, and the absence of all selfishness in his purposes. He is our pride. Still we know that *nationality* is too narrow a frame for such a mind. And at the same time that we express our sorrow that this incomparable soul, too, had to obey Nature's last command, we surrender to the world our exclusive right to weep over his loss. *He has lived for all the nations of the globe—let all nations mourn him.*"

HOT WATER FOR GREEN FLY.

We have made some experiments in order to ascertain how high the temperature of water may be, without injury to very young shoots of Roses that may be covered with green fly or aphis, when applied as a remedy. We find the insect readily killed at 120°. One plant of Paul Perras, which was plunged three times, for a second each time, into water at 135°, has a very few black spots on the tenderest of the leaves. The insects were instantly killed. Water at this temperature is, therefore, perfectly safe for any thing. As a remedy against all soft-skinned insects, we regard this as the most simple and effectual discovery ever made.

JUNE WEATHER.

The weather on the 4th of June was very unusual. The temperature here sunk to 40°, and in many places Beans, Squashes, &c., were slightly injured by frost.

The daily papers are filled with alarming accounts. At Hirndale, N. Y., ice is said to have formed to the thickness of *one inch*. We believe, however, that on the whole, no serious damage has been sustained. The fruit crops near Philadelphia promise better than they have done for years. Even the Plum, many of our friends expect to see again bearing and ripening this season.

CROPS, FRUIT, &C.

Cambridge City, Ind., May 18, 1859.

The prospects for fruit in this part of the country are not very flattering. Not more than one-half a crop, even if the season should be favorable hereafter.

T. B. M.

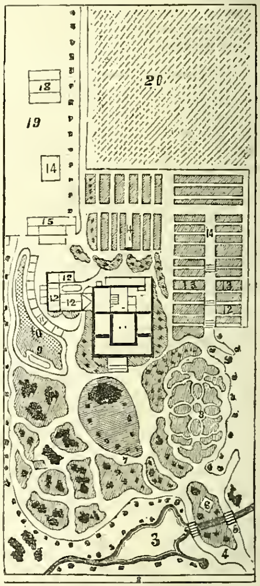
DESIGN FOR A SMALL GARDEN.

It is impossible to point out in detail how places in general should be laid out. So much depends on circumstances. The contour of the ground, the disposition of the buildings, the taste of the owners, and many other particulars, all demand concessions to them.

But yet, for all this, many hints may be gathered from plans of other places, by which those about to improve may profit much. The main points of a pretty design may be appropriated, and by adapting them to existing exigencies, can be made models of taste and good judgment.

As occasions offer, we shall give our readers plans of places that already exist, as being better than fancy designs that too often lose all their beauty and value when transferred from the paper to the ground.

The annexed cut is the ground-plan of the country-seat of A. C. Pracht, Esq., Baltimore, Md., and contains about four acres.



The taste of the proprietor leads him to value collections of rare trees and shrubs, and hence the chief beauty of the design consists in a multiplicity of paths, which afford the best opportunity of viewing and examining the individual specimens.

Where effect is desired more than individual beauty, less walks and more masses of shrubbery to conceal the one path from the other would be desirable. We may, perhaps, take this style for our next illustration.

EXPLANATION OF PLAN.

1.—Dwelling-house.
2.—Front Street.
3.—Lake and Stream of Water.
4.—Carriage-way.
5.—Bridges (rustic).
6.—Ice-house.
7.—Specimen Trees and Shrubs.
8.—Flower Garden.
9.—Raspberries.
10.—Vineyard.
11.—Grape Arbor or Trellis.
12.—Hot and Greenhouses.
13.—Terraced Garden.
14.—Kitchen Garden.
16.— " "
15.—Gardener's House, with Tool, Wash, Wood and Coal Houses attached.
17.—Chicken House.
18.—Stabling.
19.—Poultry Yard.
20.—Fruit and Strawberries.

34 *The Gardener's Monthly*

THOMAS MEEHAN, ED. PHILADELPHIA, 1859.

Under Thomas Meehan's management *The Gardener's Monthly*, first issued in 1859, appeared for thirty years. No other American horticultural periodical had as long a record; of an estimated five hundred periodicals, only forty survived until 1906. Authoritative and delightful, *The Gardener's Monthly* gave horticultural news from home and abroad, and was outstanding for its contents as well as its long life.

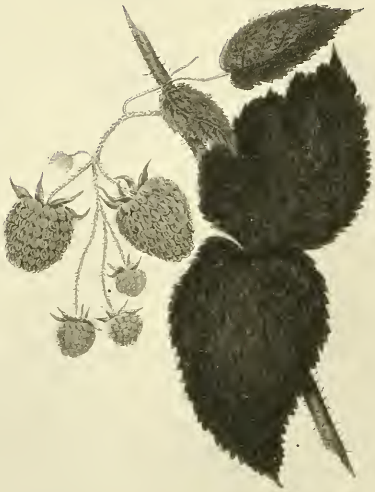
For the first year each issue had sixteen pages of three closely printed columns full of practical advice on vegetables, fruits, trees, and flowers. Letters and questions were printed with clear, simple answers; each month the meetings of the Pennsylvania Horticultural Society and other domestic and foreign societies were reported. Charming, small vignettes were frequently used and each volume was well indexed. Even today back numbers of *The Gardener's Monthly* make delightful, informative reading. After the first year, Meehan used a smaller, more compact form for the magazine.

Two things characterized every issue: a great deal of horticultural news and advice, and an easy friendly style of writing. Outside authorities contributed articles, but Meehan edited every issue and certainly wrote much of the material. He displayed remarkable industry because at the same time he contributed articles to the *Maryland Farmer*, the *New York Independent*, the New York *Tribune*, the Philadelphia *Public Ledger*, and the *Philadelphia Press*.

Along with Thomas Meehan's great knowledge and writing ability, the desire to share with his readers the basic facts of horticulture that meant so much to him is always evident.

Volume one, number seven, July, 1859.

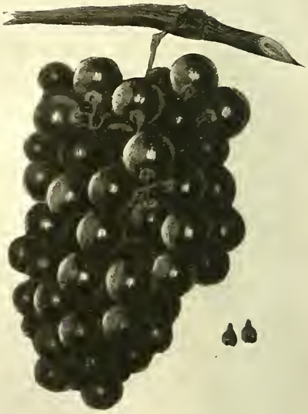
NORTH AMERICAN POMPOLOGIST



From Nature by A. Hoffy

COL. WILDER RASPBERRY.

NORTH AMERICAN POMPOLOGIST



From Nature by A. Hoffy

DIANA.

35 *North American Pomologist*

ALFRED HOFFY, ED. PHILADELPHIA, 1860.

Nearly twenty years before the *North American Pomologist*, Dr. William Draper Brincklé had begun writing books in collaboration with Alfred Hoffy, an English-born lithographer who illustrated them with luscious figures. Always wishing to keep in the background, Dr. Brincklé designed the title page of Hoffy's *North American Pomologist* to feature the artist's name, with his own identification, as the editor, set in smaller type. So the reader would not miss the point, "prepared and published by A. Hoffy" reiterates the important part the lithographer played in the production.

The thirty-six finely colored plates of apples, peaches, pears, plums, and raspberries that illustrate the book included the ten varieties described in *The American Pomologist*, 1851. Though the title page carries the statement "Book No. 1," there were no further issues.

Hoffy bravely stated in the introduction to the *North American Pomologist* that he had "again entered the arena of horticulture." He cited his original publication, *The Orchardist's Companion*, in the hope that the public would support his newest attempt.

What became of Hoffy is a mystery. His colored plates show not only great excellence of execution, but careful representation and true knowledge of fruits. He might be unknown had it not been for the generous cooperation and friendship shown him by Dr. Brincklé.

Brincklé was a busy doctor, yet he gave a great deal of time to his favorite hobby, fruit-growing and hybridizing. His work with plants was done in an upper-story room and in his backyard garden, which is described as "the size of a parlor." For many years he was a vice-president of the Pennsylvania Horticultural Society; the resolution at the time of his death speaks of him as "the Nestor of Pomologists."

Perhaps the words of Whitman Bennett sum up the contribution of such men as Hoffy and Brincklé: "the tenacious persistence with which those 'old timers' started publication after publication is proof of their deep enthusiasm for botanical and agricultural studies."

Col. Wilder raspberry was a yellow-fruited variety of finest flavor. Diana, an early ripening grape, was suitable for cultivation in the northeastern United States.

J. E. Mitchell,
Chestnut Hill.

BOTH SIDES
OF THE
GRAPE QUESTION.

COMPRISING

I.
"An Essay on the Culture of the Native and Exotic Grape."

By WILLIAM SAUNDERS,
Of Germantown, Pa.

II.
"Physiography in its application to Grape Culture."

By F. J. COPE,
Of Greensburg, Pa.

III.
"A Contribution to the Classification of the Species and Varieties of the Grape Vine, with Hints on Culture."

By J. M. McMINN,
Of Williamsport, Pa

PHILADELPHIA:
J. B. LIPPINCOTT & CO. A. M. SPANGLER.
NEW YORK:
C. M. SAXTON. BARKER & CO.
1860.

36 *Both Sides of the Grape Question*

WILLIAM SAUNDERS, J. M. MCMINN, AND F. J. COPE,
PHILADELPHIA, 1860.

The title of this little book does not suggest three essays by three authors. The essays were written in response to a premium offered by the *Farmer and Gardener*, a Philadelphia periodical, for the "Best Essay on the Grape." "After a careful examination, the premium was awarded to the one presented by William Saunders." The publisher also noted, "The freshness and novelty of the views contained in the essay prepared by F. J. Cope, and the research displayed in the one presented by J. M. M'Minn [sic], induced the committee to suggest the propriety of issuing the three essays in book form." The *Farmer and Gardener* later offered the *Grape Question* free to all dollar subscribers.

William Saunders was a frequent contributor to Hovey's *Magazine of Horticulture* and Scott's *Philadelphia Florist*, and was an editor of the *Farmer and Gardener*. Since 1854 he had been in partnership with Thomas Meehan in the practice of landscape gardening, hence the byline of Germantown on the title page. We know very little about the two other authors, F. J. Cope and J. M. McMinn.

Saunders's "An Essay on the Culture of the Native and Exotic Grape" is a thorough, well-expressed account of every detail of grape-growing. He wrote as if there was no question that everyone cultivated grapes. While many varieties he discussed have been lost, Delaware, Concord, and Catawba are still available.

Saunders considered grapes the easiest fruit to force and tells how in a succinct account. He tells us how many of each variety should be planted and that sweet grapes last best and acid, worst. Of interest to many gardeners today is the section on pot culture with clear directions for growing grapes in containers. In his essay Cope used historical, religious, and political views to support his thesis that nature is best left alone. J. M. McMinn listed North American and foreign varieties. There is an interesting section on adaptation of varieties to special localities such as Pennsylvania.

Title page.

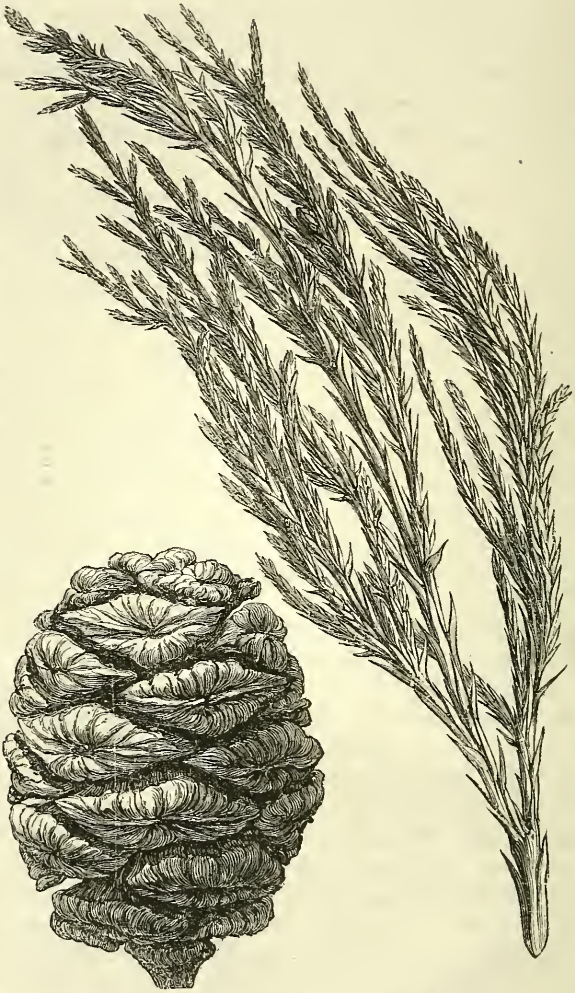


Fig. 29.—SEQUOIA GIGANTEA.—NATURAL SIZE.

37 *The Book of Evergreens*

JOSIAH HOOPES, NEW YORK, 1868.

Both the author and publisher of *The Book of Evergreens*, Josiah Hoopes and Orange Judd, were practical men, as is borne out by the subtitle of the book: "A practical treatise on the Coniferae, or cone-bearing plants." This book is decked in a strong forest-green binding with a goldleaf medallion of the Big Tree on the beveled boards. It must have been a pride of Orange Judd & Company.

The author was born in West Chester in 1832, the son of Pierce and Sarah A. Hoopes, Quakers whose ancestors arrived in 1683 from England. Josiah attended school in Philadelphia but returned to West Chester when he was eighteen and, except for his travels to nurseries in this country and botanic gardens abroad, resided there all his life. When he was twenty-one he built a small greenhouse and began to collect exotics for pleasure. His collection grew to become the Cherry Hill Nurseries which flourished through the later part of the nineteenth century.

It was Hoopes's familiarity with living evergreens that led him to distill the writings of Asa Gray, Chapman, Darlington, Endlicher, Richard, Loudon, Gordon, Lawson, Murray, Nuttall, Michaux, and others into what he called *The Book of Evergreens*, a "labor of love." The early chapters are devoted to soil and planting, propagation, pruning, diseases and pests, and the book concludes with a systematic survey of the world's conifers.

It is unfortunate that Hoopes has left few records of trees he saw. He does remark that the cone produced on a Bhotan pine (*Pinus excelsa*) was grown by A. Fiot of Bethlehem, Pennsylvania, and he illustrated it with a line drawing. He also tells us that the finest specimens of the Big Tree (now *Sequoiadendron giganteum*) were growing, in 1868, "in the extensive collection of Ellwanger & Barry, at Rochester, N.Y.," and mentions the famous ginkgo that formerly stood in "Alexander" Hamilton's Woodlands—Hoopes here confused the Hamiltons; he meant William. Sarah Hoopes, his mother, planted a Norway spruce acquired from Landreth's nursery in 1851, that grew to be perhaps the finest in America.

The Big Tree (*Sequoiadendron giganteum*).

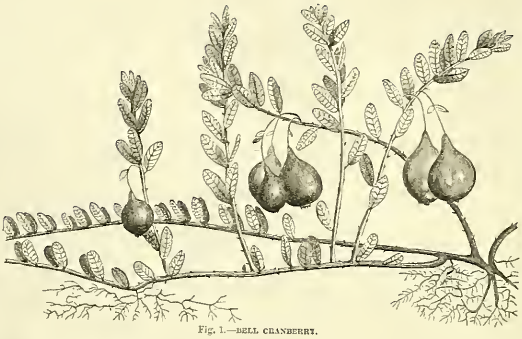


Fig. 1.—BELL CRANBERRY.

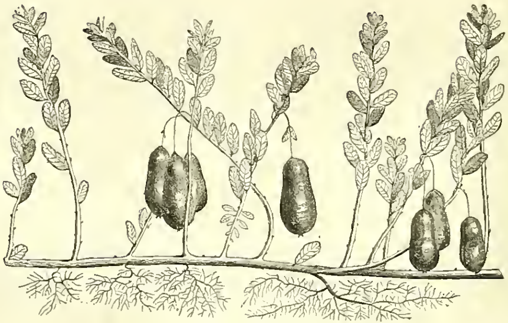


Fig. 2.—BUGLE CRANBERRY.

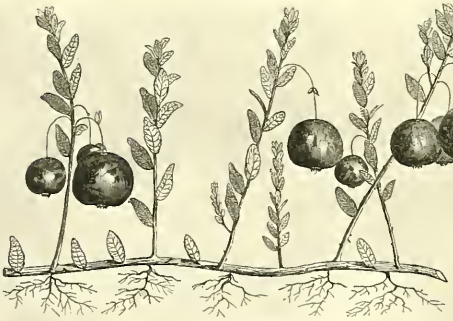


Fig. 3.—CHERRY CRANBERRY.

38 *Cranberry Culture*

JOSEPH J. WHITE, NEW YORK, 1870.

Cranberries, a unique American horticultural product, grow wild only in North America; they were used by Indians and later by the colonists. William Penn mentioned them in 1683 in a letter describing the many fruits found in the new country's woodlands. Cranberry culture apparently began about 1810 in the Cape Cod region of Massachusetts when Captain Henry Hall of Dennis rescued vines in a mere wild bog by removing competing shrublets from around the "berry plants."

Joseph J. White of Juliustown, Burlington County, New Jersey, wrote a successful treatise entitled simply *Cranberry Culture*. The first edition in 1870 was enlarged by five pages for the second edition in 1885. Orange Judd of New York City was publishing about one hundred other titles in horticulture and related fields at this same time. Commercial plantings had begun in earnest about the middle of the century in Massachusetts, somewhat later in New Jersey. Three general forms of berries were recognized: the bell, bugle, and cherry, based on shape, earliness, color, glossy surface, and high or low growth habit. By 1890, five years after Joseph White's second edition appeared, there were over one hundred named varieties although not all were reliably distinguishable.

Cranberry culture is specialized; it requires a peaty bog overlying sand and an impervious hardpan, with an ample supply of water for flooding as needed. It entails many steps—turfing, draining, ditching, sanding, and planting cuttings from vigorous runners, then flooding for winter protection, drawing off the water in spring, sometimes reflooding for insect control, and, three years after establishment, picking the fruit in the fall. The need for a manual such as White's is obvious. Such information is now supplied almost entirely by government publications.

The three general forms of cranberries: the bell, bugle, and cherry.

Chronology

JOSEPH EWAN

1682 William Penn arrived in Pennsylvania and soon distinguished five oaks and ten other trees.

1683 Francis Daniel Pastorius founded Germantown; Pietists there planted herb, medicinal, and house gardens.

1698 Edward Shippen, Quaker merchant, had an "extraordinary fine and large garden" in Philadelphia.

1716 First unambiguous account of plant hybridization is recorded by Cotton Mather; involved red and blue kernels of *Zea mays*.

1728 John Bartram purchased farm on west bank of Schuylkill River and began assembling native plants.

1731 Bartram's garden first attracted notice of Peter Collinson.

1735 Collinson arranged with Bartram to collect seeds for English patrons. ¶ James Logan published experiments on existence of sexuality in plants.

1736 John Bartram made the first of many collecting trips for seeds of native plants, to headwaters of the Schuylkill.

1737 Robert Prince opened a commercial nursery at Flushing, Long Island, that remained in business for one hundred thirty years.

1739 Lord Petre sent Miller's *Gardener's Dictionary* to John Bartram. ¶ (William Bartram born.) ¶ Gronovius published part one of *Flora Virginica* in Leiden, only identification "manual" for Atlantic colonies.

1740 John Bartram visited Peter Custis and John Clayton in Virginia. ¶ The Woodlands built. House later inherited and enlarged by William Hamilton. ¶ (University of Pennsylvania established.)

1743 Franklin, Bartram, and seven others formed American Philosophical Society. ¶ (Thomas Jefferson born.)

1748 Humphry Marshall began farming on the Brandywine, growing native plants, and acquiring books on plants. ¶ Peter Kalm, pupil of Linnaeus, visited Bartram's garden.

1753 Linnaeus published *Species plantarum*, first book to consistently adopt binomial names, extensively based on Kalm's collections. ¶ John Bartram and his son William botanized in Catskills.

1754 James Alexander, first professional gardener in colonies, began sending plants to Earl of Loudoun and patrons. ¶ (French and Indian War began.)

1760 Governor Arthur Dobbs discovered Venus flytrap in North Carolina. ¶ John Bartram visited Alexander Garden at Charleston.

1765 *Franklinia* discovered by John and William Bartram on the Altamaha River, near Fort Barrington, Georgia.

1767 William Young, Jr., collected 302 species of Carolina plants and made crude drawings in color.

1768 Adam Kuhn, native of Germantown, student of Linnaeus in 1761, became the first Professor of Materia Medica and Botany in the colonies at the College of Philadelphia (University of Pennsylvania).

1769 Franklin's *Poor Richard Improved* gave instructions for the "method of planting and cultivating vines" and wine-making. ¶ Franklin sent rhubarb seed home to America. Breintnall's leaf prints (Library Company of Philadelphia) suggest that rhubarb was here in 1738.

1772 Franklin received seeds of Chinese tallow tree (*Sapium sebiferum*) from France. ¶ (Thirty bookstores in Philadelphia in this decade).

1773 Humphry Marshall established the second botanic garden in colonial Pennsylvania at West Bradford, Chester County. ¶ (Boston Tea Party.) ¶ William Bartram returned to Florida.

1774 William Bartram sent about 100 "very curious" dried specimens to Fothergill in London from his travels in the South.

1775 William Bartram reached farthest point on his travels, Point Coupee, north of Baton Rouge, Louisiana. ¶ Biological pest control recommended in *Poor Richard*: ant hills placed in "Corn Chambers" reduces weevils. ¶ (Battle of Lexington.)

1776 John Jackson established "London Grove" as a "botanic garden." ¶ (Declaration of Independence.)

1777 John Bartram died September 22, aged seventy-eight, and his son, John Bartram, Jr., became proprietor of his garden. ¶ (Washington at Valley Forge.)

1781 (Cornwallis surrendered.) ¶ (Bank of North America established.)

1783 Broadside *Catalogue* of Bartram's Garden issued. ¶ (United States and Great Britain signed peace treaty.)

1784 David Landreth opened the first seed business in the United States in Philadelphia. ¶ Thomas Jefferson arranged with Thouin in Paris for an exchange of seeds and plants.

1785 Philadelphia Society for Promoting Agriculture founded. ¶ Marshall's *Arbustum Americanum; The American Grove* published in Philadelphia, the first American imprint devoted expressly to trees and shrubs.

1789 Benjamin Smith Barton appointed Professor of Natural History and Botany at University of Pennsylvania. ¶ (George Washington elected president.) ¶ (French Revolution began.)

1791 William Bartram's *Travels* published in Philadelphia. It included many undescribed plants of southeastern United States, some illustrated.

1792 American Philosophical Society authorized a committee to study ravages of Hessian Fly. European dealers afraid to buy United States grain.

1799 Frederick Pursh arrived from Saxony; visited Marshall and others. John Lithen, Philadelphia seedsman, issued second known broadside catalogue, probably this year.

1800 Ginkgo planted (first verified record) at Peirce farm, Kennett Square, Pennsylvania, now Longwood Gardens.

1802 M'Mahon, Philadelphia nurseryman, who had arrived in 1796, issued a one-page broadside of nursery items (one copy in the PHS library).

1803 André Michaux's *Flora Boreali-Americana*, the first flora of national scope, published in Paris, with many plates by Redouté. ¶ First American botany textbook, *Elements of Botany*, published by B. S. Barton in Philadelphia. ¶ John Lyon reported "6 or 8 full grown" *Franklinia* trees in the wild—the last recorded time seen.

1804 Soybeans first brought to the United States as ballast. ¶ Lewis and Clark Expedition set out for mouth of Columbia.

1805 Philadelphia scientists and naturalists honored Humboldt and Bonpland at a dinner at Peale's Museum.

1806 First gardening "how-to" book for United States, M'Mahon's *American Gardener's Calendar*, published in Philadelphia.

1807 John Bartram, Jr., issued a 33-page *Catalogue* of plants for sale.

1808 Thomas Nuttall arrived in Philadelphia and met Professor Barton who employed him to collect plants toward a comprehensive flora. ¶ Jefferson was growing "Mandan corn" from Missouri River Indian villages, brought by Meriwether Lewis.

1811 John Lyon arrived in Liverpool with Appalachian plants for Chelsea sale; issued broadside catalogue of many kinds offered for first time in England.

1814 Frederick Pursh described Lewis and Clark plant collections.

1815 Jefferson sold his 7000-volume library to the nation as a nucleus for the Library of Congress. He owned twenty-six botanical and horticultural titles. ¶ Correa da Serra presented the new Jussieu's Natural System of Plant Classification in botany lectures at Philadelphia.

1816 Philadelphia described as "Hotbed of Sciences, the nursery of Arts and Home of Philosophy,"[24] by an enthusiastic group of botanists meeting in 1816.

1817 Governor Clinton and Dr. David Hosack of New York were elected the first American members of what was to become the Royal Horticultural Society. ¶ William Coxe, "Father of American Pomology," published *A View on the Cultivation of Fruit Trees* in Philadelphia.

1822 New York Horticultural Society, first of its kind in the United States, incorporated with Hosack as president.

1823 Nuttall took visiting Scotsman David Douglas on a tour of Bartram's garden, then in a "deplorable state."

1826 "Silkworm Mulberry" mania that was to last for fifteen years set off by Act of Congress to encourage planting.

1827 Pennsylvania Horticultural Society, the oldest horticultural society in continuous existence in the nation, organized in Philadelphia.

1829 Pennsylvania Horticultural Society held its first public exhibitions in Masonic Hall, Chestnut Street. ¶ Massachusetts Horticultural Society founded in Boston.

1838 Dreer opened his seed business in Philadelphia, featuring ornamental trees, flower and vegetable seeds.

1842 Caleb Cope and George Pepper of Pennsylvania Horticultural Society were enthusiastic orchid collectors; John B. Smith and Richard Fetters, cactus fanciers; Peter MacKenzie specialized in acacias. Robert Buist concentrated on new introductions.

1853 John Lindley in the *Gardener's Chronicle* (London) proposed *Wellingtonia gigantea* for the Sierra Redwood.

1854 "Mammoth Tree" exhibited in New York City from reconstruction of a 60-foot bark section stripped from a *Sequoiadendron* over 300-feet tall which had grown in the Calaveras Grove of California. ¶ Philadelphia Museum, meeting place of Pennsylvania Horticultural Society, burned. Society declined until after Civil War.

1855 Publication of *Horticulturist* moved to Philadelphia from New York.

1855–66 Exhibits of Pennsylvania Horticultural Society held in Penn Square under tents.

1857 Depression, "deranged state of financial affairs of the Country," lead to financial loss for Pennsylvania Horticultural Society in twenty-ninth annual exhibition.

1863 Pennsylvania Horticultural Society under Caleb Cope organized committee to oversee plantings in Fairmount Park.

1866 First Horticultural Hall erected by Pennsylvania Horticultural Society.

1867 First annual exhibit in new Horticultural Hall. Vegetable seeds exhibited for first time. ¶ J. M. Bigelow recommended to the American Medical Association that cinchona be introduced and cultivated in the United States.

1868 Josiah Hoopes's *Book of Evergreens*, the first treatise on native conifers, published. ¶ "Mount Pleasant" incorporated into Fairmount Park.

1869 At the Grand Autumnal Exhibition of the Pennsylvania Horticultural Society, fruit surpassed all previous exhibits. Fruit from as far away as California brought in by railroad free of charge; Wells Fargo also cooperated. ¶ (Transcontinental railroad completed.)

1876 Pennsylvania International Exhibition arranged by Centennial Committee. ¶ William Saunders (No. 36) of the Department of Agriculture arranged Horticulture Exhibit.

Dramatis Personæ Whose Works Are Not Represented in the *Catalogue*

JOSEPH EWAN

JOSEPH BANKS (1743–1820). Accompanied James Cook on his first voyage, president of the Royal Society for forty-one years, wealthy patron of the natural sciences who wrote little but influenced many, including George III.

MARK CATESBY (1679–1749). English naturalist who twice visited the southeastern United States and published a two-volume *Natural History of Carolina* . . . which he himself illustrated with 220 plates, associating plants with birds and animals, a model for Audubon.

CAROLUS CLUSIUS (Charles de l'Escluse) (1526–1609). Botanist of Antwerp and Leiden, author of five commentaries, one of which publicized American discoveries, including sassafras and tropical economic plants.

PETER COLLINSON (1694–1768). Quaker woollen-draper, friend of Hans Sloane and Linnaeus; English sponsor of and agent for Bartram. He grew his American plants at Peckham and Mill Hill.

JOHN FOTHERGILL (1712–1780). Quaker physician of Yorkshire, friend of Collinson, and his successor as patron of the Bartrams; brought many American natives to flower at Upton.

ROBERT JAMES, Eighth Baron Petre (1713–1743). English country gentleman and devotee of horticulture, in the circle of Sir Hans Sloane and Peter Collinson, and patron of botany. He grew Bartram plants at Thorndon, Essex.

ANTOINE LAURENT DE JUSSIEU (1748–1836). French botanist whose *Genera plantarum* (1789) introduced a more broadly based Natural System of Plant Classification that was to displace the regimental Sexual System of Linnaeus.

PETER KALM (1716–1779). Swedish botanical traveler in America, 1748–51, whose specimens were extensively used by his mentor Linnaeus in his *Species plantarum*.

CAROLUS LINNAEUS (1707–1778). The most famous of Swedish botanists, whose writings and influence reconstructed world botany by establishing a consistent binomial scheme of naming plants. The Linnaean Society, Piccadilly, London, founded by James Edward Smith, friend of Banks, houses the pivotal collections of Linnaeus.

JOHN CLAUDIUS LOUDON (1783–1843). English horticulturist and landscape architect, tireless author and editor, exponent of plantings as "lungs of the city." Influenced Andrew Jackson Downing.

ANDRÉ MICHAUX (1746–1802). French botanical explorer who spent eleven years in North America and who published the first comprehensive account of our plants (1803). He introduced Old World plants to America and many American trees and shrubs to Europe.

FRANÇOIS ANDRÉ MICHAUX (1770–1855). Botanist and arboriculturist, who accompanied his father, André, to America, and published a three-volume work on North American trees (1810–13) that was repeatedly reissued up to 1865.

PHILIP MILLER (1691–1771). Dean of eighteenth-century English horticulture, for nearly fifty years curator of Chelsea Physick Garden, and author of the *Gardener's Dictionary* that announced many Bartram novelties.

JOHN PARKINSON (1567–1650). English apothecary, who kept a garden at Long Acre, author of two popular herbals, *Paradisi in sole* (1629) and *Theatrum botanicum* (1640).

FREDERICK PURSH (1774–1820). German botanist who tended a garden in St. Petersburg before he came to America and was employed by William Hamilton and Benjamin Smith Barton, for whom he traveled from North Carolina to Niagara Falls. Author of the first continental flora of North America (1814) which included the discoveries of Lewis and Clark in the Pacific Northwest.

HANS SLOANE (1660–1753). Center of a coterie of naturalists in the Royal Society, successful physician, whose collections formed the nucleus of the British Museum at his death.

A Note on Sources

The article "Horticulture" in L. H. Bailey's *Standard Cyclopedia of Horticulture* (1927) is a seedbed of information. Three handy tools are Alice G. B. Lockwood, ed., *Gardens of Colony and States* (1931); U. P. Hedrick, *History of Horticulture* (1950); and Dorothy S. Manks, ed., *Origins of American Horticulture* (Brooklyn Botanic Garden, 1967). *The History of the Pennsylvania Horticultural Society*, edited by James Boyd (1929), is a remarkable book but inadequately indexed. The resumé by George H. M. Lawrence, in J. Ewan, ed., *Short History of Botany in the United States* (1969), and the list of writings of Anderson, Darlington, Steere, Stetson, and Zirkle, under "Readings," will open gates of garden lore. See also William Darlington, *Memorials of John Bartram and Humphry Marshall* (Philadelphia, 1849); John W. Harshberger, *The Botanists of Philadelphia* (Philadelphia, 1899); J. Reynolds Green, *A History of Botany* (London, 1914); Ann Leighton, *Early American Gardens* (1970); and R. F. Favretti and G. P. DeWolf, *Colonial Gardens* (1972). For horticultural lithography see Katharine McClinton in *Antiques* 49 (1946) 361–363 and Whitman Bennett, *Practical Guide . . .* (1949).

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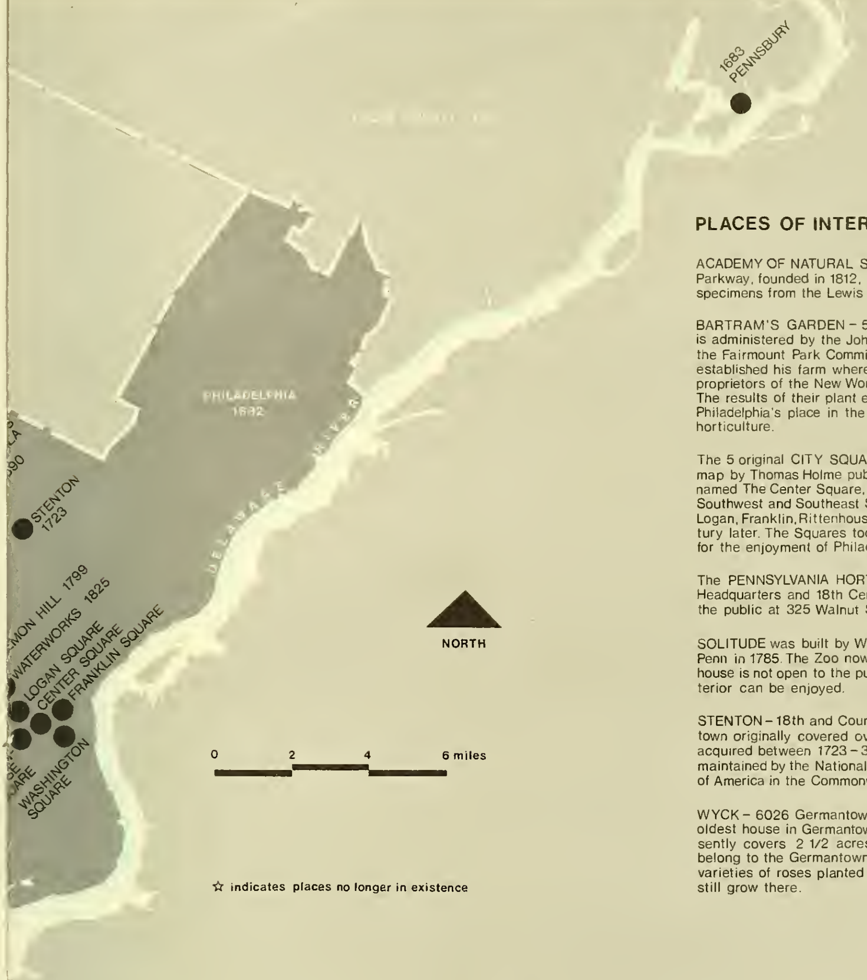


☆ indicates places no longer in existence

PLACES OF INTEREST IN PHILADELPHIA

1 ACADEMY OF NATURAL SCIENCES – 19th and the Parkway, founded in 1812, houses the herbarium specimens from the Lewis and Clark expedition.

2 BARTRAM'S GARDEN – 54th and Elmwood Avenue is administered by the John Bartram Association and the Fairmount Park Commission. In 1728 John Bartram established his farm where he and his sons were the proprietors of the New World's first botanic garden. The results of their plant explorations established Philadelphia's place in the development of American horticulture.

3 The 5 original CITY SQUARES appear on the 1681 map by Thomas Holme published in 1683. Originally named The Center Square, Northwest, Northeast, Southwest and Southeast Squares, they became Penn, Logan, Franklin, Rittenhouse and Washington a century later. The Squares today provide green spaces for the enjoyment of Philadelphians and visitors.

4 The PENNSYLVANIA HORTICULTURAL SOCIETY Headquarters and 18th Century Garden are open to the public at 325 Walnut Street.

5 SOLITUDE was built by William Penn's grandson, John Penn in 1785. The Zoo now occupies the estate. The house is not open to the public but its beautiful exterior can be enjoyed.

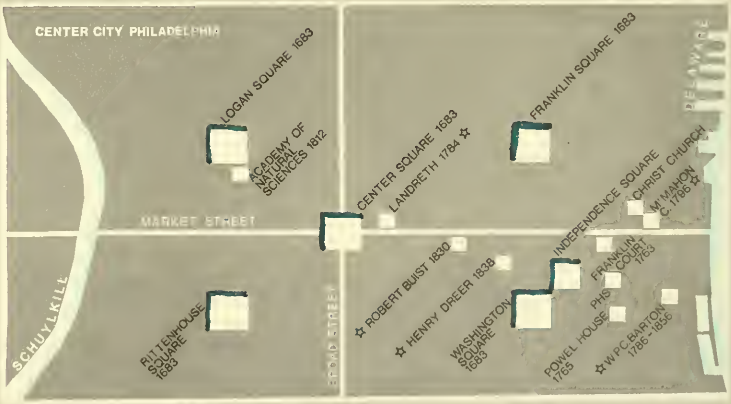
6 STENTON – 18th and Courtland St. in lower Germantown originally covered over 500 acres and was acquired between 1723 – 30 by James Logan. It is maintained by the National Society of the Colonial Dames of America in the Commonwealth of Pennsylvania.

7 WYCK – 6026 Germantown Avenue known as the oldest house in Germantown, dating from 1690, presently covers 2 1/2 acres. The gardens and house belong to the Germantown Historical Society. Many varieties of roses planted before the Revolution still grow there.

HORTICULTURAL PLACES OF HISTORIC INTEREST IN PHILADELPHIA AND VICINITY

was the 500 acre
f James Logan;
f the Indians, asso-
William Penn, a
and social leader.
on, now a 6 acre
k, Logan studied
orn during 1735.

Lemon Hill was the estate of Henry Pratt from 1799 – 1838 Pratt's gardens and conservatories contained over 700 varieties of plants. In 1855 the estate's 52 acres were formally opened as Fairmount Park.



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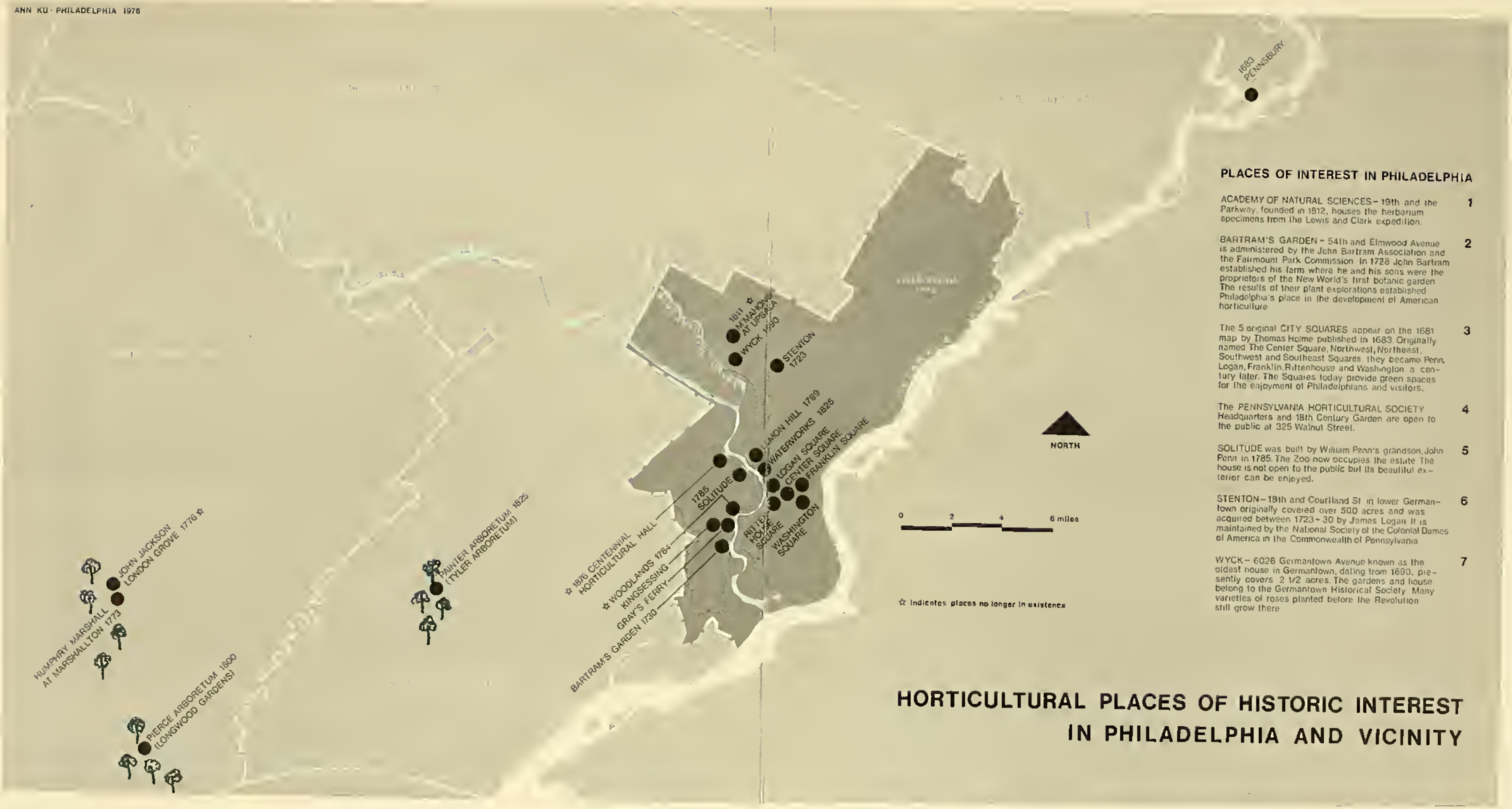

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HORTICULTURAL PLACES OF HISTORIC INTEREST IN PHILADELPHIA AND VICINITY

In 1830 Robert Buist joined Thomas Hibbert prop of the first notable florist shop in Philadelphia. The business was noted for its success with roses. Upon Hibbert's death Buist established a seed company

Discovered in 1765 by John Bartram, Franklinia alatamaha has become extinct in the wild, but has been preserved through seed brought to Philadelphia by William Bartram and grown there

It is believed that the seeds of the Osage Orange Maclura pomifera grown by David Landreth and Bernard M'Mahon in their nurseries in 1804 – 5 came from the Lewis and Clark expedition

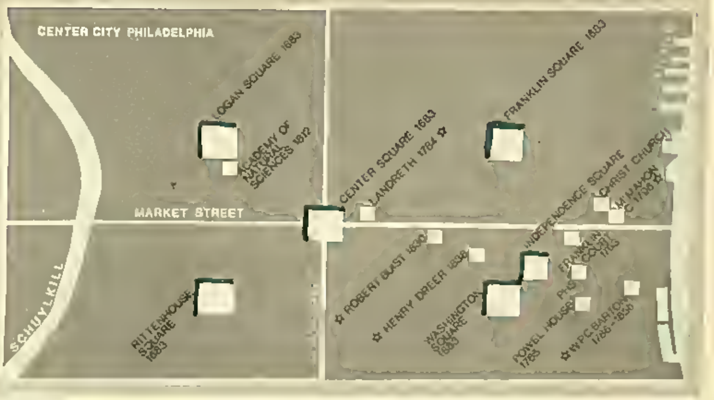
The snowy-flowered Fringe Tree Chionanthus virginica is native from southern Pennsylvania to Florida and Texas. It was cultivated and sold by John Bartram and later by Thomas Meehan

The establishment of the Landreth seed company in Philadelphia in 1784 marked the debut of the American seed industry. Landreth's cultivated many exotics and the largest Camellia collection of the time

White Mulberry Morus alba still grows at Wyck, reminder of the early promise of silk culture there. A public filature was established in Philadelphia. Queen Charlotte wore a court dress of American silk

Stenton was the 500 acre estate of James Logan, friend of the Indians, associate of William Penn, a political and social leader. At Stenton, now a 6 acre city park, Logan studied Indian Corn during 1735

Lemon Hill was the estate of Henry Pratt from 1799 – 1838. Pratt's gardens and conservatories contained over 700 varieties of plants. In 1855 the estate's 52 acres were formally opened as Fairmount Park



Index

Academy of Natural Sciences of Philadelphia, 81
Adlum, John, 33
Aiton, William (1731–1793), 43
Alexander, James, 107
Allen, John Fisk (1807–1876), 93
Almanack (Leeds), 18
American Flower Garden Directory (Hibbert and Buist), 71
American Gardener's Calendar (M'Mahon): 1806 edition, 22–23, 24, 55, 109; 1857 edition (Smith, ed.), 23, 95
American Handbook of Ornamental Trees, The (Meehan), 91
American Herbal, 15
American Manual of the Mulberry Trees (Rafinesque), 75
American Medical Botany (Bigelow), 23, 61
American Philosophical Society, 31, 33, 49, 53, 107, 109
American Pomologist, The (Brincklé), 85, 99
Antill, Edward (1701–1770), 33
apple, "North American," 19
Arbustum Americanum (Marshall), 17, 19, 41, 108
azalea, 24, 71

Baldwin, Dr. William, 23, 24
Banister, John (1650–1692), 49
Banks, Sir Joseph (1743–1820), 19, 43, 79, 113, 114
Barclay, Robert, 43
Barton, Dr. Benjamin Smith (1766–1815), 26, 47, 49, 53, 59, 61, 63, 67, 109, 110, 114
Barton, Dr. William Paul Crillon (1786–1856), 59, 65
Bartram, John (1699–1777), 18–19, 24, 26, 31, 35, 37, 39, 41, 43, 45, 106–108, 113, 114. *See also* Bartram's garden
Bartram, John, Jr. (1743–1812), 31, 35, 37, 39, 43, 108, 109
Bartram, William (1739–1823), 19, 22, 24, 26, 31, 37, 41, 43, 45, 49, 65, 106–109 *passim*
Bartram's garden, 19, 26, 31, 37, 49, 65, 91, 106–108 *passim*, 110
Bigelow, Dr. Jacob (1787–1879), 23, 61, 111
Bond, Dr. Thomas (1712–1784), 41
Bonpland, Aimé, 81, 109
Book of Evergreens, The (Hoopes), 103, 111
book-making, 14
Borthwick, William, 35
Botanica Neglecta (Rhoads), 39
Both Sides of the Grape Question (Saunders, McMinn and Cope), 101
Bradford, Andrew, 14
Breintnall, Joseph, 107
Brincklé, Dr. William Draper (1799–1863), 25, 85, 99
British Gardener's Calendar (Borthwick), 35
British Museum (Natural History), 43
Buist, Robert (1805–1880), 63, 71, 73, 79, 85, 89, 91, 111
Burlington, N.J., 57, 105

camellia, 24, 69
Carr, Robert (1777–1866), 37
Carr, Ann Bartram, 37
Carson, Dr. Joseph (1808–1876), 81
Catalogue d'Arbres Arbustes et Plantes Herbacées d'Amérique (Young), 39
Catalogue of American Trees, Shrubs and Herbacious Plants (John Bartram, Jr.), 26, 37
Catalogue of Garden, Grass, Herb, Flower, Tree & Shrub-seeds, Flower Roots &c. (M'Mahon), 22
Catesby, Mark (1679–1749), 23, 113
Chelsea Physick Garden, 33, 43, 51, 87, 114
Cherry Hill Nurseries, 103
Chester County, Pa., 19, 41, 67, 103, 108
Chinese tallow tree (*Sapium sebiferum*), 108
Clusius, Carolus (Charles de l'Escluse) (1526–1609), 21, 113
Collins, Minton, 25
Collinson, Peter (1694–1768), 18–21 *passim*, 24, 31, 35, 39, 41, 45, 106, 113
Cook, Capt. James (1728–1779), 19, 113
Cope, Caleb (1797–1888), 25, 91, 111
Cope, F. J., 101
Correa da Serra, José Francisco (1751–1823), 20, 21, 111
Costa, Hippolyto Jose da, 21

Coxe, William (1762–1831), 57, 110
Cranberry Culture (White), 105
Critica botanica (Linnaeus), 18
Crukshank, Joseph, 41
Cushing, Dr. Caleb, 23, 59, 61

Darlington, Dr. William (1783–1863), 19, 49, 67, 91, 95, 103
Darlingtonia, 67
Deane, Samuel, 15
Downing, Andrew Jackson (1815–1852), 73, 83, 87, 93, 114
Downing, Charles, 83
Drake, Sir Francis, 21
Dreer, Henry A., 111
Dryander, Jonas, 43

Early Gardening Catalogues (Harvey), 25
Eastwick, Andrew, 91
Edinburgh Botanic Garden, 71
Elements of Botany (B. S. Barton), 49, 109
Eliot, Jared, 14–15
English Flora (Weston), 35
English horticulture, interaction with American, 18–19, 21–23, 31, 35, 39, 41, 43, 45, 87, 106, 110, 113, 114
Epitome of Mr. Forsyth's Treatise on the Culture and Management of Fruit Trees, An (American Farmer), 51
Essay on Field Husbandry, An (Eliot), 14
Essay on the Cultivation of the Vine, An (Antill), 33
Evans, Lewis, 31

Fairmount Park, 73, 111
Farmer and Gardener, 101
fertilizers, 71
Fetters, Richard, 111
Flora Boreali-Americana (Michaux), 23, 109
Flora Cestrica (Darlington), 67
Flora of North America, A (W. P. C. Barton), 65
Flora Virginica (Gronovius), 106
Florula Cestrica (Darlington), 67
Forsyth, William, 51
forsythia, 52
Fothergill, Dr. John (1712–1780), 41, 45, 108, 113
French horticulture, interaction with American, 19, 21–22, 39, 41, 69, 108, 114
Franklin, Benjamin (1706–1790), 14, 19, 31, 41, 107, 108
Franklinia alatamaha, 19, 23, 37, 43, 107, 109
Frazer, Persifor, 24–25
Fruit and Fruit Trees of America, The (Downing), 83

Gardener's Dictionary, The (Miller), 19, 43, 106, 114
Gardener's Monthly, The (Meehan), 89, 97
Genera of North American Plants, The (Nuttall), 23
Genera plantarum (Jussieu), 63, 113
Gentiana porphyrio, 26; illus., 16
George III, King, 43, 113
Germantown, Pa., 20, 106
geranium, 24, 27
ginkgo, 21, 103, 109
Gleanings from the Most Celebrated Books on Husbandry, Gardening, and Rural Affairs (Anonymous), 53
Gordon, William, 22
Gordon's Nursery, England, 22
Gray, Asa (1810–1888), 87, 103
Gray, Christopher, 35
Great Exhibition of 1851, London, 95
Gronovius, Jan Fredrik (1690–1762), 106
Gross, Dr. Samuel, 59
"Grumblethorpe," 20

Hall, Capt. Henry, 105
Hamilton, William, 21, 23, 37, 103, 107, 114
Harvey, John, 25, 35
Hibbert, Thomas, 71
Hill, D. and C. A., 73
Hill, John, 39
Hoffy, Alfred M., 77, 85, 99
Hoopes, Josiah (1832–1904), 103, 111
Hopkinson, Francis (1737–1791), 18
Horticulturist, 93, 111
Hortus Kewensis (Aiton), 43
Hosack, Dr. David, 110
Humboldt, Alexander von, 81, 109
hybridization, 106

Illicium parviflorum, 22
Illustrations of Medical Botany (Carson), 81
Inaugural Botanico-Medical Dissertation on the Phytolacca decandra of *Linnaeus, An* (Shultz), 47
Independence Square, 17
insect control, 26–28, 71, 105, 108, 109
Ixia acuta, 65

Jackson, John, 19, 108
James, Robert (Eighth Baron Petre) (1713–1743), 26, 106, 113
Jefferson, Thomas (1743–1826), 22, 24, 49, 55, 107, 108, 110
Jefferson Medical College, 59
Judd, Orange, 103, 105
Jussieu, Antoine Laurent de (1748–1836), 21, 41, 63, 89, 110, 113

Kalm, Peter (1715–1779), 19–20, 23, 107, 114
Kelpius, Johannes (1673–1708), 20

Kinn, Mathias, 24
Kew Gardens. *See* Royal Botanic Gardens, Kew
Kuhn, Dr. Adam, 107

Landreth, Cuthbert (son of David), 69, 71
Landreth, David (1752–ca. 1828), 22, 23, 69, 71, 108. *See also* Landreth's nursery
Landreth, David (son of David), 69, 71
Landreth's nursery, 22, 24, 49, 69, 103
landscape design, 17–18, 83, 114
Laurel Hill Cemetery, 61, 95
Leeds, Daniel, 18
"Lemon Hill," 71, 73
Lewis, Meriwether (1774–1809), 22, 49, 110
Lewis and Clark Expedition (1803–1806), 22, 25, 55, 109, 110, 114
Lézermes, —, 41
Lindley, John (1799–1865), 87, 111
Linnaeus, Carolus (1707–1778), 18, 47, 107, 113, 114; Linnaean system, 22, 41, 89
Lithen, John, 25, 109
Loddiges, Conrad, 22, 25
Logan, James (1674–1751), 18, 106
Lombardy poplar, 21
Longwood Gardens, 109
Loudon, John Claudius (1783–1843), 23, 83, 103, 114
Loudoun, Earl of, 107
Louis XVI, King, 41
Lyon, John (ca. 1765–1814), 23, 24, 109, 110

MacKenzie, Peter, 73, 111
M'Mahon, Ann, 55, 95
M'Mahon, Bernard (ca. 1775–1816), 22, 24, 26, 55, 71, 95, 109
McMinn, J. M., 101
Maddock (or Maddox), James, 35
magnolia, 24, 37, 69
Marshall, Humphry (1722–1801), 17, 19, 41, 107–109 *passim*
Mason, Joseph, 65
Massachusetts Horticultural Society, 110
Mather, Cotton, 106
Mease, Dr. James, 53
Meehan, Thomas (1826–1901), 89, 91, 93, 97, 101
medicinal plants, 13, 15, 47, 49, 55, 59, 61, 65, 67, 81, 106, 111
Memoir on the Cultivation of the Vine (Adlum), 33
Michaux, André (1746–1802), 22–24 *passim*, 39, 103, 109, 114
Michaux, François André (1770–1855), 24, 114
Miller, Philip (1691–1771), 19, 33, 43, 51, 106, 114
Muhlenberg, Henry, 45

Natural System of Plant Classification (Jussieu), 21, 63, 89, 110, 113
New England Farmer, The (Deane), 15
New York Horticultural Society, 110
North American Pomologist (Hoffy), 99
Nuttall, Thomas (1786–1859), 21, 23, 37, 49, 63, 65, 103, 110

Observations (John Bartram), 31
Old Blush rose (Hybrid Perpetual Rose), 79
Olmsted, Frederick Law (1822–1903), 83
Orchardist's Companion, The (Hoffy), 77, 99

Packard, Dr. Francis R., 81
Paradisi in sole (Parkinson), 18, 114
Parkinson, John (1567–1650), 18, 114
Parsons, Samuel, 79
Pastorius, Francis Daniel, 20, 106
Peale, Rembrandt, 24, 27
Penn, William (1644–1718), 17, 18, 105, 106
Pennant, Thomas, 49
Pennsylvania Horticultural Society, The: bicentennial display, 13; value, 25; founding and history, 28, 110–111; officers and members, 25, 57, 79, 91, 93, 99; awards and contests, 26, 73; exhibits, 63, 77, 89, 110–112 *passim*; criticism of, 89; mentioned, 24–25, 69, 77, 83, 87, 95, 97, 111
Pepper, George, 111
Periodical catalogue of green-house and hardy herbaceous plants and shrubs &c. (Landreth), 69
Petre, Lord. *See* James, Robert
Philadelphia Florist and Horticultural Journal (Scott), 25, 89, 101
Philadelphia Society for Promoting Agriculture, 108
Pietists, 20, 106
poinsettia, 73, 79
pokeweed (*Phytolacca decandra*), 47
Practical Treatise (on grape-growing) (Allen), 93
Pratt, Henry (1762–1838), 73
Prince, Robert, 106
Prince, William, 37, 79
Pursh, Frederick (1774–1820), 23–25, 49, 63, 109, 114

Rafinesque, Constantine Samuel (1783–1840), 75
raspberry, European (*Rubus idaeus*), 85
Ray, John (1628–1705), 83
rhododendron, 69
rhubarb, 19, 107
Rose Manual, The (Buist), 79
Royal Botanic Gardens, Kew, 43, 89, 91, 93
Royal Horticultural Society, 51, 57, 110
Royal Society, 19, 113, 114
Royen, David van, 22

salmonberry (*Rubus spectabilis*), 24–25
sassafras, 21, 113
Saunders, William (1822–1900), 101, 112
Schmidtz, Gerhard, 25
Scott, Robert Robinson (1827–1877), 25, 89, 101
Seckel pear, 77
Sequoiadendron giganteum, 103, 111
sexuality, plant, 18, 106
Sharp, William, 93
Shippen, Edward (1639–1712), 18, 106
Shultz, Dr. Benjamin, 47
"Silkworm Mulberry mania," 13, 75, 110
Sloane, Hans (1660–1753), 113, 114
Smith, David, 57
Smith, James Edward, 114
Smith, John B., 111
Smith, John Jay, 55, 95
Solander, Daniel Carl (1722–1782), 43
soybean, 109
Species plantarum (Linnaeus), 107, 114
spleenwort (*x Asplenosorus ebenoides*), 89
Sutro, Adolph, 26
Sylva (Nuttall), 37
Systema naturae (Linnaeus), 18

Theory of Horticulture, The (Lindley), 87
Thorburn, Grant, 24
Tippecanoe peach, 77
Torrey, John, 63
Travels (Kalm), 20
Travels through North and South Carolina, &c. (William Bartram), 45, 109
Treatise on the Theory and Practice of Landscape Gardening, Adapted to North America, A (Downing), 83

University of Pennsylvania, 47, 49, 59, 61, 63, 67, 81, 107, 109
"Upsala" (M'Mahon nursery), 95

Vaughan, Samuel, 17, 41
Vegetable Materia Medica of the United States (W. P. C. Barton), 59
Venus flytrap, 39, 107
Victoria regia (Allen), 93
View on the Cultivation of Fruit Trees, A (Coxe), 57, 110

Washington, Mt., 61
water lily, 39, 93
Weiser, Conrad, 31
Weston, Richard (1733–1806), 35
White, Joseph J., 105
willow, European yellow (*Salix vitellina*), 19
wine-making, 13, 33, 53, 107
Wistar, Dr. Caspar (1756–1833), 47
wisteria, 47
"Woodlands" (home of William Hamilton), 21, 23, 37, 103, 107
"Wyck," 20

Young, William, Jr. (1742–1785), 39, 107

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